

AUSTRALIAN TRAP-DOOR SPIDERS

BY

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Plates xii.-xxiv.

INTRODUCTION.

This paper deals with a large amount of material chiefly personally collected by one of the authors [R.H.P.] between 1907-1917 in all the Continental States, except Victoria.

The collections in South Australia have been much assisted by teachers of the State schools, who in many cases, turned the nature study interests of their scholars towards the study of spiders. This was stimulated by the contribution of a series of illustrated papers on Araneidæ to *The Children's Hour*. One of the most able and indefatigable collectors was Mr. T. Nevin, at that time at Mallala, thirty miles north of Adelaide. The references to localities in this paper will shew how thoroughly the district was worked, and a great quantity of material of all kinds of spiders sent in for study.

The Queensland collections have been largely augmented by Dr. T. Bancroft, of Eidsvold, who lives in a district at the head of the Burnett River watershed, which is evidently surpassingly rich in Territellariæ. To his efforts we owe the discovery of the new group Dolichosterneæ and many new genera and species.

SOUTH AUSTRALIA.

The first collections made, were by one of the writers [R.H.P.] on the Adelaide Plains and the Mount Lofty Ranges. On the Adelaide Plains, with an average rainfall of a little over twenty inches, the summer heat conditions are at times very severe.

The common trapdoor spiders are *Blakistonia aurea*, Hogg, and *Aganippe subtristis*, Camb.

The *Blakistonia* is to be found nearly everywhere in parks and gardens, paddocks, and the unploughed ground along the highways leading from the city. In many places between Adelaide and the sea, the nests of this species occur in great numbers, not infrequently there being several to the square yard (Pl. xiii., fig. 8). The *Blakistonia* must be regarded as having considerable economic value in reducing grasshoppers and other pests. As is usual with the Territellariæ the inhabitants of the burrows are always females and the males are chiefly found in the cold, wet weather, hiding under stones. The young seem to stay with the mother for a good time after leaving the pillow-shaped egg sac, which is suspended half way down the tube. Egg sacs were found in April and in the winter (June and July), the young frequently occupy the tube, leaving it in the spring to colonise in the vicinity of the parent burrow. It is to be noted that the first infantile burrows are not provided with lids; after about the

third moult the lid is put on and the increase in the size of the burrow is kept up by cleaning out and adding to the lid until the maximum is reached. When the lid is broken off a fresh one is soon built from the hinge inwards. In the wet weather in moist situations the burrow is often half full of water. This does not seem to incommode the spiders as they have even been found below the water level.

The presence of enemies, especially the larger predatory wasps, makes it necessary for the spider to seal its burrow by spinning round the edge of the lid on the inside surface. Occasionally one finds the bottle-shaped pupa cases of the wasps in the burrow with the fragments of the spider exoskeleton.

Aganippe subtristis, Camb. (Pl. xii., fig. 3, and Pl. xxi., fig. 32), is far less abundant; it has a rounder lid, and is less easy to find than the foregoing. It is very variable in size, and occasionally one finds a giantess of such proportions that it is hard to recognise as the ordinary form. The habits of this species closely agree with those of the *Blakistonis*. Although occasional specimens of other species may be found on the plains they are chiefly met with as we ascend the foothills of the Mount Lofty Ranges. Thus on Black Hill we find *Aganippe modesta*, sp. nov. (Pl. xiii., figs. 4 and 5 and Pl. xxi., figs. 47 and 48), and the peculiar *Lumpopodus scintillans*, gen. et sp. nov., of the group *Diplotheleæ*.

The males of the latter species had been long known to us from the sea coast and Mallala, but it was not until 1917 that we found the female, and established the fact that a member of the *Barychelinae* can build a nest and lid like those of the *Ctenizæ* (Pl. xvii., figs. 17-20 and Pl. xviii., figs. 21 and 22); on this occasion two specimens were found.

The higher altitudes of the Mount Lofty Ranges, where the rainfall varies from forty to, in places, fifty inches and over, has proved to be very rich in general species, and certainly it has been well worked. *Blakistonis aurea*, Hogg, is still found there, and often shews a peculiar modification of the lid, which is furnished with accurately interlocking dentations. *Missulena rubrocapitata*, Ausser. and *M. occatoria*, Walck., occur frequently, the highly coloured males of the former being most often sent in.

In June, 1908, a female of the latter was discovered in the lining tube intact, and this was found to have a door of the wafer type without any admixture of earth. Subsequently, two more *Missulena* burrows were found with wafer doors, in 1910, at Terowie.

The roadside cuttings around Mount Lofty and Aldgate, and thence to Mylor, have been most thoroughly searched and have yielded a number of species of *Aganippe*, *Dugesiops*, *Armadalia*, *Aname* and *Chenistonia*. One of the commonest is *Aname nebulosa*, sp. nov., which is found practically everywhere and which builds the most ingenious nest yet found amongst the Australian *Territellariæ*. Other species of *Aname* such as *A. birói*, Kulez., *A. grandis*, sp. nov. and *A. hirsuta*, sp. nov., are content with a burrow closed with a hymen, with a small central aperture to squeeze through.

The nest of *A. nebulosa* (Pl. xx., figs. 26, 27, 28), if in an exposed place, has a collar of leaves or grass to turn off the rain. As a rule the

burrow is seven inches deep, and at four inches from the top the closing mechanism is fixed. This is formed by a cuff of web, free at the top, fixed below, and weighted on one side by a flat-sided or hemispherical pill of earth, which, when the burrow is open, is fitted into a hollow in its side. When, however, the cuff is pulled down from below, the pill falls over and forms an effectual door to the lower part of the tube. This is more effectual as a protection than the surface lid, which is not wholly secure against predatory wasps. It is singular that we find the occurrence of the Territellariæ found in the Mount Lofty Ranges much influenced by the geological and forest conditions. The gritty clay of the stringy bark country (*Eucalyptus capitellata*) being in our experience much richer than the open forest country with its sparse undergrowth. The agricultural areas or grass plains to the north of Adelaide, extending about one hundred and fifty miles, have not been exhaustively studied, but many species are recorded from Booboorowie (near Burra), Yarcowie, Canowie and Mallala; the last named place, perhaps, giving the best idea of the denizens of the open Mallee scrubs.

In the winter of 1910, one of us [R.H.P.] spent several days at Pichi Richi Pass, a gorge in the Flinders Ranges, between Quorn and Port Augusta. This was found to yield a good number of species, including the largest South Australian Territellarian, *Selenocosmia stirlingi*, Hogg. This species lives in deep burrows and spins a hymen like the *Anames*. The large *Aname grandis* is also found there. This constructs a burrow identical with that of *Selenocosmia*, with a hymen.

Blukistonina aurea, Hogg, also extends its limits northward to the Flinders Ranges, where it is found in company with *Ajanippe subtristis*, on the banks of the Pichi Richi Creek at Wool Shed Flat. In 1910, this gorge was an excellent hunting ground for all sorts of Araneids, but it was noticed in passing through on January 1st, 1918, that the foothills and gullies, formerly visited [R.H.P.] were covered with wheat fields and nearly all the mallee scrub removed.

The Pichi Richi Pass opens out on the plain at the head of Spencer's Gulf, near Port Augusta. The country round the head of the Gulf was visited in the same expedition. This country is largely sand, with samphire flats, covered with *Kochia*, *Salsola*, blue bush and salt bush. Besides Territellariæ there are several species of lid-building *Lycosus*, some of which build a firm collar to hold the lid, and having a primitive hinge. Species that do not build lids in this country would be exposed constantly to the danger of having their burrows filled with the drift from sand storms.

The best field found in the vicinity of Port Augusta was a samphire flat to the east of the town. There were found *Ajanippe robusta*, sp. nov., *Anidiops manstridgei*, Pocock and *Gaius hirsutus*, sp. nov. The latter, which is rare, sometimes reaches a large size and a giant specimen, undoubtedly of considerable age, had a burrow about twelve inches in depth, over a quarter of which was packed the debris of food, chiefly parts of Coleoptera.

The burrows and lids of this species, as of that of *Anidiops*, do not shew great variation from the Ctenizid type, i.e., a thick lid of alternate layers of earth and web, like a gun wad, with a well constructed hinge.

The part of South Australia south of the Murray has not so far been well explored, and will probably yield new species. The same is true of Yorke's Peninsula and Eyre's Peninsula, of which our knowledge is limited to very few species.

WESTERN AUSTRALIA.

May, 1912.—After examining the country in the vicinity of Perth, some excursions were made into the Darling Ranges and down the South Coast as far as Pinjarra. King's Park proved to be the best collecting ground near Perth, and *Aganippe rhapsiduca*, sp. nov., was found on the sandy cliffs overlooking the Swan River and in the banks of the foot paths which go along the river face of the cliffs. This species builds a well-formed lid of the usual Aganippid type, and the excavation was of the ordinary form and length. A prolonged search in this locality failed to disclose any further forms.

At Kalamunda, in the Darling Ranges, *Albaniana flavomaculata*, sp. nov., was found under grass trees, the nests being of Ctenizid type. *Aname fuscocincta*, sp. nov., was also collected here. At the Mundaring Weir, were noticed the abodes of Territellariæ, but time did not allow of their investigation.

At Armadale, on the Southern Coast, road conditions proved favourable, and on the sheltered banks of a small creek *Albaniana inornata*, sp. nov., and *A. flavomaculata*, sp. nov., were discovered. These built beautifully formed, though fragile, lids with ridges sharply cut, suggesting the impression of a *Chione*, or other bivalve shell. *Armadalia setosa*, sp. nov., *Chenistonia auropilosa*, sp. nov., and *Ixamatus maculatus*, sp. nov., were also found in this favoured locality. A search was made further along the road, and near Jarrahdale, *Aname maculata*, sp. nov., was found in the steep banks of one of the creeks coming down from the Darling Ranges. There are many of these creeks, and it is certain that new discoveries await anyone who will carefully examine their banks.

In the West Australian Museum at Perth, there is the large lid of a Ctenizid from Pinjarra. This spot was visited but the species that makes the type of lid referred to was not found, although, a little later, we obtained a nest from the local school master.

December, 1917.—The country round the upper and lower Blackwood River in South Western Australia:—The most interesting discovery was *Aganippe latior*, O. P. Cambridge, described many years ago. This species is not uncommon on the road banks following the course of the Blackwood River to Nannup. It was found in company with *Arbanitis festivus*, sp. nov., and *Aname intricata*, sp. nov. The *A. latior* was busy rearing its brood, and its egg bags were suspended from the roof of the horizontal burrows in such a way that the spider could get in and out without disturbing them. The burrow of *Arbanitis festivus* was closed by a lid which did not differ greatly from that of *Aganippe latior*, but the egg bag was of a different form, being suspended by eight or ten threads like a hammock from the sloping roof of the burrow. The Karri country, between Nannup and the coast, failed to disclose any Ctenizæ, and the only species obtained was *Chenistonia villosa* at Carlotta Brook. This interesting spider was found under logs, one with the young in the egg bag just preparing to emerge.

NEW SOUTH WALES.

August, 1910, Sydney and Blue Mountains.—This excursion yielded in the immediate vicinity of Sydney, *Arbanitis gracilis*, sp. nov., a beautiful species building a thin sandy lid. It was found in the Domain under overhanging rocks near Mrs. Macquarie's Chair, and afterwards at various places, including Balmoral and Manly, and seems to be widely distributed round the harbour. In the gully at the back of Clifton Gardens, *Dyarecyops melancholicus*, sp. nov., was discovered, and there it is not uncommon. In one large burrow, a male and female were captured, which is quite unusual in our experience. A new *Anume*, *A. decora*, was collected at the same place, and there are probably other species awaiting the collector in the sheltered rock ledges here and in Middle Harbour.

A visit to Jenolan Caves in the same month, yielded *Arbanitis montanus*, sp. nov., found along the creek outside the Grand Arch; and on the return between Mount Victoria and Katoomba, *Dyarecyops birói*, Kulcz., was found in abundance. This species was collected by Biró, of the Hungarian National Museum, in 1900, on his way back from New Britain and Huon Gulf, where he had collected a large number of Araneids and several Aviculariidae.¹

January, 1911, South Coast of New South Wales.—The first place visited was Stanwell Park, a subtropical rain forest in the Illawarra district, where *Stanwellia decora*, sp. nov., was observed and collected. Its simple unclosed burrows are common on the bank forming the upper side of what is now the old road. Here the ground is moist and soft, overgrown with dwarf ferns and mosses, and shaded from the sun most of the day. This was the only species found in the coal area, Ctenizæ evidently being absent. The next Territellarian met with on this walking tour was at Termeil Mountain, south of Ulladulla. This was *Atrax versuta*, Rainb. (Pl. xviii., fig. 30), of which several specimens were collected; all had the same peculiarity of nidification. On the sides of the road where roots had been exposed, the wood had decayed, leaving a tube of bark. This the *Atrax* had lined several inches (in one case, thirteen inches) back, and at the mouth of the burrow the web was expanded. One specimen was very large, and fought vigorously after being ejected from its burrow. It became much reduced and shrivelled to one of ordinary size after a few days in spirits.

No further Territellariæ were met with until Kianga Valley, near Narooma, was reached. Here, in the midst of hills, clothed with open forest, a creek runs to the sea and a subtropical rain forest follows the water course. The ground is moist and everything grows with the utmost luxuriance, reminding one of a forest creek in the tropical rain forests of the Wide Bay district. In this favoured area, three species were found—*Dyarecyops birói*, Kulcz. (Pl. xiv., fig. 9), *Chenistonia hoggi*, Rainb., and *Arbanitis elegans*, sp. nov. All were in simple burrows without any inward or outward attempt at protection. The tour was continued to Dromedary Mountain, thence to Bega and Eden, without any further

¹ Kulczyński, Ann. Mus. Nat. Hung., vi., 1908, p. 428.

species being observed. The subtropical scrub comes in again at the back of Eden, and a careful examination of this area is sure to disclose further species.

QUEENSLAND.

October, 1912, Kedron Brook.—Specimens had already been received from this source from Dr. Bancroft, but one of the writers [R.H.P.] was anxious to visit this promising locality, which is fast being spoilt by settlement. At the time of this visit, which was made from Eagle Junction, there was still some of the original scrub and some giant trees on the river banks. *Tambouriniana variabilis*, sp. nov., var. *floromaculata*, was common, and two species of *Arbanitis*, *A. similaris*, sp. nov., and *A. hirsutus*, sp. nov., occurred less frequently—all three species being mingled, and all within reach of flood waters.

October, 1912.—The basaltic tableland of Tambourine Mountain is a typical vine scrub with a dense forest association of palms, Eucalypts and Indo-Malayan trees, e.g., *Flindersia*, *Castaneospermum*, *Drepanandra*, *Cedrela*, etc. The trees are of enormous height, closely packed together, with long, straight, bare trunks, often branchless, except at the crown, and some forms, nettles, bean trees, and figs, are buttressed up to ten and twelve feet from the ground. The crowns of the *Arancaria cunninghami* are laden with epiphytic ferns, which ultimately, by their accumulated weight, break the branches and fall to the ground, where they form a suitable nidus for some Territellariæ. Epiphytic orchids and ferns also occupy the trunks, but these were searched in vain for any arboreal form of trap-door spider.

One of the chief characteristics of the forest is the enormous number of vines, Bignonias, etc., which are seen going up out of sight to reach the sun on the tree tops. There is very little grass or other undergrowth in the denser parts of the forest. On such a high, undisturbed island plateau, we expected to find a rich hunting ground for Araneidæ, and indeed for Araneidæ as a whole, it is so, being especially rich in Attidæ.

The first Territellarian, which presented itself was *Atrax valida*, sp. nov. (Pl. xviii., fig. 29), a near relative of *A. versuta*, Rainb. This builds a white funnel of web around the opening of the burrow; it is abundant, and a large fallen epiphytic fern mass will often contain several nests. They are common at the old mill, and on digging one out it was found consuming a small frog (*Ilyla*), of which, only the two hind legs were left; whether this is a common habit of the species we cannot say. Like others of the genus *Atrax*, this species is of a vicious disposition, and puts up a strong fight before it can be induced to enter a collecting tube.

Out in the open, chiefly at the base of *Macrozamia dennisoni*, which here reaches a great size, are found the dwellings of the beautiful *Arbanitis pulchra*, sp. nov. Their peculiarity is the large circular collar of web lying on the ground, spun very close and apparently intended to prevent the dry earth falling into the burrow, rather than for the purpose of a snare. This species avoids the dense forest. Another species, *Arbanitis papilio-sus*, sp. nov., does not shew any peculiarity in its dwelling.

At the top of the St. Bernard Falls, looking towards the sea, was found a colony of the large form of *Tambouriniana variabilis*, sp. nov.

These splendid spiders were in a secluded spot which had seldom been visited before. They were living in burrows of the true Ctenizid type, with large thick lids. This form was not found anywhere else on the mountain, and only five specimens in the colony, all of large size, so they are evidently not very prolific. *Anane villosa*, sp. nov., and *Albaniana villosa*, sp. nov., were also collected on this occasion, and these species probably complete the census of the Territellariæ of this particular area.

With the exception of two species, *Dyarcopsis ionthus*, from Burwood, near Sydney, and *Anane butleri*, from Merri Creek, Victoria, the whole of the material described below was from Dr. Pulleine's collection. The authors wish the reader to note that measurements do not include the palces.

FAMILY AVICULARIDÆ.

Sub-family ACTINOPODINÆ.

Genus *Missulena*, Walck.

(=*Eriodon*, Latr., nom. nud.)

MISSULENA INSIGNE, O. P. Cambr.

Eriodon insigne, O. P. Cambr., Ann. Mag. Nat. Hist. (4), xix., 1877, p. 29; Hogg, Proc. Zool. Soc., 1901, p. 223, figs. 21, a, b.

Hab.—Keith, South Australia. Widely distributed. Recorded from Brisbane, Queensland; Dimboola, Victoria; and Swan River, Western Australia.

MISSULENA RUBROCAPITATA, Auss.

Eriodon rubrocapitatum, Auss., Verh. Zool. bot. Ges. Wien, xxv., 1875, p. 140, pl. v., figs. 1-4.

Eriodon semioccinium, Sim. in Semon, Zool. Forsch. Austr. Malay Archipel., 1896, Lief. 8, p. 343.

Actinopus formosus, Rainb., Proc. Linn. Soc. N.S.Wales, xxi., 1896, p. 328, pl. xx.; *op. cit.*, xxii., 1897, p. 253.

Eriodon rubrocapitatum, Hogg, Proc. Zool. Soc., 1901, p. 226, fig. 23a.

Eriodon semioccinium, Hogg, *loc. cit.*, p. 228.

Eriodon rubrocapitatum, Rainb., Rec. Austr. Mûs., v., 1, 1903, p. 64, fig. 6.

Obs.—*M. rubrocapitata* and *M. insigne* are very closely allied. They differ, however, in their eye formula. See Hogg's note and figures (*suprà*) on this point.

Hab.—Prospect Hill, up meadows; also Ambleside (formerly Halm-dorf), South Australia, October, 1908. Distributed over Northern, Eastern and Western Australia.

MISSULENA REFLEXA, sp. nov.

(Plate xxi., figs. 33 and 34).

♂ Cephalothorax, 4.3 mm. long, 5 mm. broad; abdomen, 5.7 mm. long, 5.7 mm. broad.

Cephalothorax.—Longer than broad, pubescent. *Pars cephalica* bright red, truncate in front, raised high, strongly arched, sides and posterior

extremity declivous, segmental groove distinct; a narrow, but well defined grey mark or line runs down the middle; this latter commences between, and just in front of, the front median eyes, at the rear of which it is interrupted; *ocular area* broader than long; *clypeus* slightly undulated, not deep, precipitate. *Pars thoracica* broad, dark brown, channelled down the middle, reflexed, and retreating laterally towards posterior angle, radial grooves present but indistinct; *thoracic fovea* deep, recurved; *marginal band* narrow, red. *Eyes*.—Small, nearly equal in size, distributed over two rows of four each, and with the exception of the front median pair (which are only removed from each other by a space equal to once their individual diameter), widely separated; lateral eyes elliptical, oblique, inner angles raised, dark brown (Pl. xxi., fig. 33). *Legs*.—Long, olivaceous brown, shining, hairy, well armed with long spines, *cocæ* olivaceous green; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, concolorous with legs, hairy; tibial joint, small; genital bulb, shining, reddish; style moderately long, sharply pointed (Pl. xxi., fig. 34). *Falces*.—Concolorous, with cephalic segment well arched, moderately clothed with rather long black hairs; *rastellum* consists of a single transverse row of strong teeth; inner angle of the furrow of each falx armed with a row of seven teeth, of which the third and fifth from the fang are much the longest; outer angle armed with only one tooth; *fang* long, reddish, well curved. *Maxillæ*.—Orange-yellow, shining, arched, moderately hairy, heel well rounded at base, upper angle acuminate at apex. *Labium*.—Coniform, elongate, rather darker than maxillæ, moderately hairy, apex fringed with rather long black hairs. *Sternum*.—Longer than broad, arched, anterior angle rather deeply excavated, lateral and posterior angles undulated, orange-yellow in front, thence smoky yellow, moderately clothed with rather long black hairs and a few long black bristles; sternal sigilla submarginal, anterior pair round, median and lateral pairs elliptical, the latter much the largest. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, moderately clothed with long, black hairs, superior surface dull cinnamon-yellow, with a large pale yellowish patch in front; sides cinnamon-yellow, hairy; inferior surface concolorous, thickly clothed with long, black hairs. *Spinnerets*.—Short, hairy, concolorous, apices yellow; inferior pair cylindrical, close together.

Obs.—Closely allied to, but easily distinguishable from *M. insigne* and *M. rubrocapitata* by eye formula, distinction of falces, and colour of abdomen.

Hab.—Keith, South Australia.

MISSULENA OCCATORIA, Walck.

(Plate xii., figs. 1 and 2).

Missulena occatoria, Walck., Tab. des Aran., 1805, p. 8, pl. 2, figs. 11-14;

Id., Ins. Apt., 1837, i., p. 252.

Eriodon occatorium, Lucas, Ann. Soc. Ent. France (4), v., 1865, p. 309, pl. 8; L. Koch, Die Arach. des Anstr., i., 1873, p. 457; Hogg, Proc. Zool. Soc., 1901, p. 220; Rainb., Rec. Austr. Mus., v., 1, 1903, p. 63, fig. 5.

Missulena (Eriodon) occatoria, Hogg, Proc. Zool. Soc., 1908, p. 335, figs. a, b.

Obs.—Living specimens kept for observation at the Australian Museum, failed to make lids for their subterranean retreats.—W.J.R.

Hab.—Brisbane, Queensland; Mount Lofty, South Australia. Ranges through Eastern, Southern and Western Australia.

MISSULENA FORMIDABILE, O. P. Cambr.

Eriodon formidabile, O. P. Cambr., Journ. Linn. Soc., Zool., x., 1868, p. 226; L. Koch, Die Arach. des. Austr., 1873, i., p. 454; Hogg, Proc. Zool. Soc., 1901, p. 222; *Op. cit.*, ii., 1902, p. 121 (footnote).

Obs.—This we take to be O. P. Cambridge's species, as the eye formula agrees well with that author's description, and also that of Hogg's (*suprà*).

Hab.—Mallala, South Australia.

Sub-family CTENIZINÆ.

Group CYRTAUCHENIÆ.

Genus *Cantuaria*, Hogg.

CANTUARIA HOGGI, Simon.

Cantuaria hoggi, Simon, Die Fauna Sud West Austr., i., 1908, p. 361.

Hab.—Avenue Range, South Australia, April, 1908.

Group AGANIPPEÆ.

Genus *Aganippe*, O. P. Cambr.

The genus *Aganippe* is typically Australian. Up to the date of the publication of this paper, seven species had been recorded to it. To this number seven more are now added, all of which are described hereunder. In addition to this, the male of *A. subtristis*, O. P. Cambr., is also described. The following table may assist the student in the elucidation of the species:—

- Front eyes of male about twice their individual diameter apart; stigma of palpal bulb broad, twisted, and terminating in a long fine style; cephalothorax, legs and abdomen setose; sternum terminating in an acute point between fourth pair of coxæ.....*A. pulleinei*, Hogg.
- Front eyes of male about three times their individual diameter apart; stigma of palpal bulb very slightly twisted, the style long and blunt; cephalothorax and abdomen setose; posterior extremity of sternum less acute than in *A. pulleinei*.
- Front eyes of female fully four times their individual diameter apart; abdominal muscle spots distinct.....*A. subtristis*, O. P. Cambr.
- Front eyes of male one and a half their individual diameter apart; cephalothorax, abdomen and legs strongly setose; stigma of palpal bulb broad, twisted, spatulate, and terminating with a short, fine style.
- Front eyes of female separated from each other by a space equal to rather more than once their individual diameter; abdomen densely matted with long hairs, and having in addition a number of long bristles or setæ; muscle spots large, distinct, yellow.....*A. raphiduca*, sp. nov.

- Front eyes of female fully twice their individual diameter apart; front and rear side eyes of nearly equal size; second or intermediate pair largest of the series, abdomen dark brown spotted with yellow.....*A. bancrofti*, sp. nov.
- Front eyes fully twice their diameter apart; abdomen dark brown, densely hairy.....*A. villosa*, sp. nov.
- Front eyes fully twice their individual diameter apart; legs short, stout; abdomen chocolate-brown, mottled with yellow; muscle spots yellow, prominent.....*A. robusta*, sp. nov.
- Front eyes two and a half times their individual diameter apart; abdomen ovate, black, marked with broad, recurved transverse bars.....*A. ornata*, sp. nov.
- Front eyes fully twice the individual diameter of one of their second or median neighbours apart; median eyes (second row) largest of the series; style of palpal bulb twisted and terminating in a long, fine point; muscle spots distinct, yellow.....*A. berlandi*, Rainb.
- Front eyes of male once their individual diameter apart; second or intermediate eyes largest of the group and about half their individual diameter apart; palpal stigma twisted, style rather short.....*A. smeatoni*, Hogg.
- Front eyes of female about twice their individual diameter apart; front and rear side eyes equal; second or intermediate eyes small, equal in size to those of the rear medians.....*A. latior*, O. P. Cambr.
- Front median eyes more than one and a half times the long diameter of the rear eyes, and at least once their own individual diameter apart; labium nearly twice as broad as long, hollowed in front.....*A. occidentalis*, Hogg.
- Front pair of eyes about once their own individual diameter apart; rear median eyes minute, each separated from its lateral neighbour by a space equal to that of three times its own individual diameter; labium broader than long.....*A. whitei*, Rainb.
- Front eyes rather more than once their individual diameter apart; thoracic fovea deep, procurved; posterior sigilla round, and away from margin; a few small spines on maxillæ; none visible on labium.....*A. modesta*, sp. nov.
- Front eyes just touching edge of clypeus, once and a half their own individual diameter apart; thoracic fovea deep, procurved; posterior sigilla large, and away from margin; small cluster of spines at base of maxillæ, none on lip.....*A. pelochroa*, sp. nov.

AGANIPPE (?)PULLEINÆ, Hogg.

Arganippe pulleini, Hogg, Proc. Zool. Soc., 1902, p. 128, figs. *a*, *b*, *c*.

Hab.—Mount Pleasant, April, 1908, also Tea-tree swamp, Grange, South Australia. Formerly recorded from Blakiston and Hallett's Cove, South Australia.

AGANIPPE SMEATONI, Hogg.

Arganippe smeatoni, Hogg, Proc. Zool. Soc., ii, 1902, p. 126, figs. *a*, *b*, *c*, pl. xiii, fig. 7; Simon, Hist. Nat. des Araign., ii, 1897 (1903), p. 903.

Obs.—An immature female example, which may probably prove to be the young of this species. At present the male only is known definitely.

Hab.—Booboorowie, South Australia. Originally recorded from Blakiston.

Aganippe subtristis, O. P. Cambr.

(Pl. xxi., figs. 32, 35, 36, 37.)

Arganippe subtristis, O. P. Cambr., Ann. Mag. Nat. Hist. (4), xix., 1877, p. 28, pl. vi., fig. 3; Pocock, *Op. cit.*, (6), xix., 1897, p. 112; Hogg, Proc. Zool. Soc., 1901, p. 231; *Op. cit.*, 1902, p. 126, pl. xiii., fig. 6.

In 1877, as quoted above, the Rev. O. P. Cambridge described and figured the above species, erecting for its reception, at the same time, the genus of which it forms the type. The type specimen was a female example, and dry, and the description incomplete. In 1899 Pocock published additional details in elucidation of the species, and this was followed in 1901, and again in 1902, by Hogg with further additional remarks and a figure. Up to the present, however, the male has remained unknown in literature, but in Dr. Pulleine's collection there are examples from several localities. The description of the male is as follows:—

♂. Cephalothorax, 12 mm. long, 9.5 mm. broad; abdomen, 9 mm. long, 7.3 mm. broad.

Cephalothorax.—Yellow, obovate. *Pars cephalica* raised, arched, truncated in front, smooth, very sparingly clothed with short yellow down; a thin fringe of black setose bristles runs down the middle from rear of ocular area; segmental groove distinct; *ocular area* black, broader than long and furnished in front with a few black setæ; *clypeus* sloping forward, hyaline. *Pars thoracica* broad, moderately arched, sparingly clothed with yellow down, smooth, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* thickly fringed with black setæ. *Eyes*.—Arranged in three rows of 2, 2, 4. Anterior pair nearly three times their individual diameter apart, and raised on black rings; a space nearly equal to once their individual diameter separates them from their neighbours of the second row; second pair round, rather smaller than their anterior neighbours, and separated from each other by a space equal to about once their individual diameter; those of the rear row are smaller still but of equal size, and form a slightly recurved line; each inner eye is separated from its lateral neighbour by a space equal to nearly once their individual diameter; intermediate eyes of third row widely separated (Pl. xxi., fig. 32). *Legs*.—Yellow, long, tapering, moderately hairy, but thickly clothed with setæ, and armed with a few not very strong spines; tibia i. furnished on inner angle with an apophysis (Pl. xxi., fig. 35); leg iv. strongest; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, similar in colour, clothing and armature to legs; tibia, inflated and furnished with an apophysis (Pl. xxi., fig. 36); tibial joint small; bulb uneven, shining dark brown laterally and beneath; style long, twisted and terminating in a somewhat obtuse point (Pl. xxi., fig. 37). *Falces*.—Moderately projected forward, concolourous with cephalothorax, sides and inner angles thickly clothed with stout bristles, and displaying naked patches; *fang* long, well curved, dark brown, shining. *Maxille*.—Long, yellow, arched, divergent, clothed with long hairs and coarse bristles or setæ, heel rounded. *Labium*.—Normal, concolourous, submerged beneath maxillæ. *Sternum*.—Concolourous with labium, pyriform, thickly studded with long, black setæ; posterior sigilla orange-coloured and removed from margin. *Abdomen*.—Obovate, yellow brown, slightly overhanging base of cephalothorax, arched; superior surface clothed with fine hairs and thickly studded with black setæ; sides and

inferior surface concolourous, hairy, but less densely setose; lung spots distinct. Spinnerets.—Normal.

Obs.—Specimens contained in the above series are in various stages of development from the half-grown to adult. The older examples are much the darkest. After *Blukistonia aurea*, Hogg, this is the most common Ctenizid of the plains, and is quite frequent in the gardens and roadsides around Adelaide. The nest is not quite so apparent as that of *Blukistonia*, and it is less frequently found. The lid is nearly orbicular and flat above and below only having a very shallow bevel into the tube which is well lined and frequently five to six inches deep, being quite vertical in soft ground. The breeding habits of this spider have not been observed, as the males are rare and seldom found in the tubes. The species has a very wide distribution in South Australia and rarely examples attain very large size, either from great age or specially favourable circumstances.

Hab.—Males: North Adelaide (July, 1908), Happy Valley (April, 1908), Yarcowie, Booboorowie (May, 1908), Mallala, and Tea Tree Gully (November, 1903), South Australia. Females: East of Spencer's Gulf, Canowie, Booboorie (April 25, 1908), Pichi Richi, Mallala, Yarcowie, Kalangadoo, foot of Black Hill, and Port Augusta, South Australia.

AGANIPPE LATIOR, O. P. Cambr.

Aganippe latior, O. P. Cambr., Ann. Mag. Nat. Hist. (4), xix., 1877, p. 29, Pl. vi., fig. 3.

Eucyrtops latior, Pocock, *op. cit.* (6), xix., 1897, p. 113; Hogg, Proc. Zool. Soc., 1901, p. 232.

Aganippe latior, O. P. Cambr., Hogg, Proc. Zool. Soc., 1902, p. 126, Pl. xiii., fig. 5.

Obs.—One female example collected by Dr. R. H. Pulleine. The specimen agrees very well with the descriptions given by the Rev. O. P. Cambridge, and Mr. R. I. Pocock, and Mr. R. H. Hogg's figure (*suprà*). Up to the present time only one example of this unique species has been recorded, and it, the type which is in the British Museum, was collected by Mr. George Clinton, at Perth, West Australia. In his original description Cambridge says:—"The abdomen is hairy and of a reddish-warm colour, but it was too shrunken to give any exact idea of its form." The following notes on the Blackwood River specimen may be of service:—

♀. Cephalothorax, 9·4 mm. long, 8·7 mm. broad; abdomen, 13·1 mm. long, 8·7 mm. broad.

Abdomen.—Obovate, yellow-brown, faintly spotted with yellow, slightly overhanging base of cephalothorax, two widely separated well defined muscle-spots near the middle; superior surface and sides densely hairy and having in addition a few bristles; inferior surface yellow, its dark hirsute clothing imparting to it a somewhat smoky yellow appearance.

Spinnerets.—Yellow, clothed with dark hairs; superior spinners stout, slightly tapering, basal joint longer than the second and third combined, the third minute and dome-shaped; inferior pair very short, rather stout, and separated from each other by a space equal to once their own individual transverse diameter.

Hab.—Blackwood River, South West Australia, December, 1917.

AGANIPPE RHAPHIDUCA,² *sp. nov.*

(Pl. xxi., figs. 38-42).

♂. Cephalothorax, 7.2 mm. long, 6.3 mm. broad; abdomen, 7.2 mm. long, 4.5 mm. broad.

Cephalothorax.—Obovate, uneven, dark brown, sparingly clothed with short, fine downy hairs, and rather strongly so with short, black setæ. *Pars cephalica* raised, narrow and truncated in front, fringed laterally with short, stiff, black setæ, segmental groove distinct; *ocular area* raised, arched, rather longer than broad, nearly black; *clypeus* undulated, hyaline. *Pars thoracica* arched, broad, radial grooves distinct; *thoracic fovea* deep, straight; *marginal band* fringed with strong black setæ. *Eyes*.—Distributed over three rows of 2, 2, 4; those of the front row are about one and a half their individual diameter apart, and touch the edge of the clypeus; those of the second row are distinctly larger than their anterior neighbours, from which latter they are separated by a space equal to about three quarters that of their individual diameter; the posterior row is slightly recurved, and arranged in pairs; of these the inner eyes are smaller than their lateral neighbours, and do not touch them; the eyes of the second row, as already pointed out, are larger than those of the first, and the latter are, again larger than the two laterals of the third row; the inner eyes of the latter are situated very close to those of the second row (Pl. xxi., fig. 38). *Legs*.—Long, tapering, concolourous with cephalothorax, hairy, armed with moderately long spines, and thickly beset with black spine-like setæ; tibia i. furnished with an apophysis (Pl. xxi., fig. 39); metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3; fourth pair strongest. *Palpi*.—Concolourous with legs, and similar to them in colour and armature, short, robust; tibia furnished with an apophysis (Pl. xxi., fig. 40); tibial joint small; bulb red, rounded shining, uneven; stigma broad, twisted, spatulate, and terminating with a short, stiff, blunt style; interior of spatula yellow (Pl. xxi., fig. 41). *Falces*.—Concolourous with cephalothorax, short, not robust, moderately projected forward, arched, hairy; *fang*, reddish-brown, moderately long, well curved. *Maxillæ*.—Long, divergent, arched, heel well rounded at base, yellow, hairy, a few small spines on inner angle. *Labium*.—Concolourous, normal, not spined. *Sternum*.—Yellow, pyriform, very moderately arched, broadest between third pair of coxæ, clothed with yellow hairs and stiff black bristles; posterior sigilla largest, situated at a point between second and third coxæ, submarginal. *Abdomen*.—Ovate, slightly overhanging base of cephalothorax; superior surface dark brown (nearly black), well arched, hairy, thickly beset with spine-like setæ, and displaying near the middle two large and prominent, yellow lung spots; sides dark brown also, and similar to superior surface in clothing and armature; inferior surface yellow, and clothed with long dark hairs. *Spinnerets*.—Yellow, hairy, superior pair sturdy, first joint longest, the third shortest and dome shaped; inferior pair very small, and separated from each other by a space equal to about once their individual diameter.

² ῥαφιδονυχος, needle-bearing; in allusion to the creature's armature.

Obs.—At first sight very like *A. subtristis* in general appearance, but easily distinguished from that species by its much smaller size, eye formula, spatulate style of palpus, tibial apophysis of leg i. and the prominent abdominal lung marks.

♀. Cephalothorax, 9.5 mm. long, 6.3 mm. broad; abdomen, 10.3 mm. long, 6.3 mm. broad.

Cephalothorax.—Obovate, yellow, with yellow-brown markings, sparingly clothed with fine yellowish pubescence. *Pars cephalica* well arched; thoracic groove profound; *ocular area* longer than broad, raised and strongly arched, rather dark, and furnished with a few long, black bristles; *clypeus* hyaline, sloping well forward, indented at the middle. *Pars thoracica* arched, sinuous laterally, radial grooves strongly defined; *thoracic fovea* deep, slightly procurved; *marginal band* broad, pallid, fringed with fine, yellowish hairs. *Eyes*.—Distributed over three rows of 2, 2, 4. The front pair elliptical, poised obliquely on black rings, touching margin of clypeus, and separated from each other by a space equal to rather more than once their individual diameter; median pair round, slightly larger than their anterior neighbours, and separated from each other by a space scarcely equal to that of once their own individual diameter; this pair is also separated from their anterior neighbours by a space equal to that of once their own individual diameter, and again by nearly the same distance from the inner eyes of the posterior row; posterior row slightly procurved on its front line and recurved on the posterior line; lateral eyes of this row elliptical, seated obliquely, about same size as those of the front row, and mounted on black rings; inner eyes minute, ringed with black; each is separated from its lateral neighbour by a space equal to that of once its own diameter; the two pairs constituting the third row widely removed (Pl. xxi., fig. 42). *Legs*.—Moderately long, strong, yellow, densely clothed with long black hairs, bristles and setae, but showing naked patches on their upper surface; each tibia, metatarsus and tarsus armed with long, strong spines underneath, those on legs i. and ii. being the longest; the underside of each leg clothed with long, dark hairs and bristles; metatarsi and tarsi i. and ii. scopulated; claws long, well curved, and serrated at base. *Palpi*.—Long strong, yellow, similar in clothing and armature to legs i. and ii. *Falces*.—Yellow, well projected forward, inner angles and sides densely hairy, upper surface smooth; apices densely hairy and furnished with a powerful *rustellum*; upper angle of the furrow of each falx armed with seven teeth, and the lower with five; *fang* long, well curved, reddish. *Maxille*.—Yellowish-red, arched, divergent, well rounded at base, thickly matted with long hair, and furnished with a few small spines near the base at the inner angle. *Labium*.—Normal, concolourous with cephalothorax, submerged beneath bases of maxillae, hairy, not spined. *Sternum*.—Pyriform, yellow, arched, well clothed with dark hairs and bristles, anterior sigilla marginal, the posterior large, round, removed from margin, and seated at a point between second and third pair of coxæ. *Abdomen*.—Ovate, brown, spotted with yellow, overhanging base of cephalothorax; upper surface thickly matted with dark brown hairs and bristles, and marked with four lung spots, the posterior pair of which are seated about the middle, are much the largest, and the widest apart; beneath the latter there are two large elliptical, obliquely directed yellowish marks,

and beneath these again three slightly curved, interrupted transverse bars; sides yellowish-brown, spotted with yellow, and similar to superior surface in clothing; inferior surface yellow, thickly clothed with black hairs. *Spinnerets*.—Yellow, short, stout, hairy; superior pair have the first joint longer than the second, and the second longer than the third; the latter is domed; inferior pair very short and separated from each other by a space equal to once their individual diameter.

Obs.—Some of the female specimens are rather larger than that selected for the type, and some lighter in colour, but in each the lung spots are distinct and well defined. The species appears common around Perth.

Hab.—King's Park, Perth (May 21, 1912), Keith, Armadale, West Australia (May 26, 1912).

AGANIPPE BANCROFTI, *sp. nov.*

(Pl. xxi., fig. 43).

♀. Cephalothorax, 9·2 mm. long, 6·3 mm. broad; abdomen, 10·5 mm. long, 6·3 mm. broad.

Cephalothorax.—Obovate, yellow-brown, rather thickly clothed with fine, moderately long, pale yellowish hairs. *Pars cephalica* strongly arched, truncated in front, fringed with short black hairs, thoracic groove distinct; *ocular area* longer than broad, slightly raised and furnished with a tuft of bristles in front of, and between anterior pair of eyes; *clypeus* hyaline, deep, sloping forward, sinuous. *Pars thoracica* moderately broad, arched, radial grooves defined; *thoracic fovea* deep, slightly procurved; *marginal band* broad, pallid, fringed with short black hairs. *Eyes*.—Distributed over three rows of 2, 2, 4; anterior pair elliptical, seated obliquely, poised on black rings, and separated from each other by a space equal to twice their individual diameter; median pair largest of the series, round, separated from their anterior neighbours by a space equal to nearly once their own individual diameter, and from each other by about one half their individual diameter; posterior row procurved on its front line, and recurved on the rear; posterior side eyes elliptical, same size as those of the posterior row, seated obliquely, and poised on black rings; inner eyes small, removed from second row by a space equal to once their individual diameter, round, each touching black ring of its lateral neighbour (Pl. xxi., fig. 43). *Legs*.—Moderately long, strong, tapering, yellow, hairy, but displaying naked patches; each tibia, metatarsus and tarsus, armed on the underside with long, fine spines; metatarsi and tarsi i. and ii. scopulated; metatarsus iv. has four short, strong spines on the inner side; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour and clothing to legs; two or three long, weak spines on tibia; tarsus scopulated. *Falces*.—Dark brown, moderately strong, projected well forward, arched, hairy; *rastellum* composed of three transverse rows of not very strong teeth; outer ridge of the furrow of each falx unarmed with teeth, whilst the inner has a row of eight strong teeth; *fangs* long, well curved, nearly black. *Maxillae*.—Yellowish, hairy, arched, apices divergent, heel well rounded, bases thickly studded with small spines; inner angles fringed with a long, red beard. *Labium*.—Concolourous, short, broad, free, arched, submerged, devoid of spines, but furnished with a few bristles. *Sternum*.—Concolourous also,

broadest between third pair of coxæ; sigilla marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, moderately hairy; superior surface and sides dark brown mottled with yellow; inferior surface yellow; hairy. *Spinnerets*.—Yellow, hairy; superior pair stout, first joint longest, the third shortest and domed; inferior pair minute, rather less than their individual diameter apart.

Hab.—Eidsvold, Queensland. Named in honour of the collector, Dr. T. Bancroft.

AGANIPPE VILLOSA, sp. nov.

(Pl. xxi., fig. 44.)

♀. Cephalothorax, 9.9 mm. long, 6.9 mm. broad; abdomen, 9.5 mm. long, 6.5 mm. broad.

Cephalothorax.—Obovate, mahogany brown, shining, moderately pilose. *Pars cephalica* high, well arched, truncated in front, segmental groove distinct, compressed laterally; a fringe of black bristles runs down the middle; there are also a few short black bristles at rear of ocular eminence; *ocular area* raised, dark brown, rather longer than broad, furnished with a few long, strong black bristles; *clypeus* not deep, undulating. *Pars thoracica* uneven, radial grooves distinct; *thoracic fovea* deep, slightly procurved; *marginal band* moderately broad, undulating. *Eyes*.—Distributed over three rows of 2, 2, 4. Front eyes close to margin of clypeus, somewhat elliptical, poised upon black rings, and separated from each other by a space equal to rather more than twice their individual diameter; second pair of eyes round, rather smaller than foregoing, separated from their anterior neighbours by a space equal to about twice their individual diameter, and from each other by nearly one diameter; rear lateral eyes elliptical, largest of the entire group, placed somewhat obliquely, and poised upon black rings; intermediate eyes rather smaller than those of the second row, elliptical, poised on black rings, near to, but not touching, their lateral neighbours; the posterior row procurved on its front line and recurved at the rear (Pl. xxi., fig. 44). *Legs*.—Concolourous with cephalothorax, densely clothed with long, coarse bristles, but displaying naked patches; underside of tibiæ i. and ii. armed with several short, strong spines; metatarsus iii. armed on upper side with six short, strong, black spines arranged in pairs; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Rather long, strong, similar in colour and clothing to legs; patella, tibia and tarsus bespined; the latter scopulated. *Falces*.—Projected well forward, rather darker than cephalothorax, inner and outer angles and apices densely clothed with coarse hairs or bristles and displaying naked patches; *rastellum* consists of three transverse rows of strong teeth; inner angle of the furrow of each falx armed with six strong teeth, and the outer with nine smaller ones; in addition to these there is an intermediate row consisting of several small teeth. *Maxille*.—Arched, shining, yellow-brown, hairy, heel well rounded at base, apex of inner angle obtusely pointed; there is a cluster of small spines at the basal angle just above apex of lip. *Labium*.—Normal, concolourous, shining, well arched, hairy, devoid of spines. *Sternum*.—Pyriform, concolourous also, shining, rather thickly clothed with long, black hairs or bristles;

sigilla marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, dark brown, densely hairy. *Spinnerets*.—Concolorous with abdomen, hairy; first joint of superior pair long, the third shortest and domed; inferior pair very small, and separated from each other by a space equal to once their individual diameter.

Obs.—A very distinct form. Unfortunately the specimen had been dried, consequently it was somewhat shrivelled, and as a result of drying some of the leg spines had fallen off.

Hab.—Bridgewater, South Australia (October, 1911).

AGANIPPE ROBUSTA, *sp. nov.*

(Pl. xxi., figs. 45 and 46.)

♀. Cephalothorax, 13·8 mm. long, 8·8 mm. broad; abdomen, 16·2 mm. long, 10 mm. broad.

Cephalothorax.—Obovate, yellow-brown, shining; pilose. *Pars cephalica* high, well arched, thoracic groove well defined; a row of moderately long, stiff bristles runs down the middle; *ocular area* broader than long, slightly raised and furnished with a few long bristles; *clypeus* hyaline, sloping forward, indented at the middle. *Pars thoracica* broad, moderately arched, retreating posteriorly, radial groove distinct; *thoracic fovea* deep, procurved; *marginal band* pallid, fringed with fine yellow hairs. *Eyes*.—Distributed over three rows of 2, 2, 4. The two front eyes are near to the edge of the clypeus, elliptical, and separated from each other by a space equal to fully twice their individual diameter, and from those of the second row by rather more than one; the eyes of the second row are round, rather small, and separated from each other by a space equal to more than once their individual diameter; posterior row distinctly procurved on the front line and slightly recurved on the rear; lateral eyes of this row equal in size to the anterior eyes, elliptical, seated obliquely, and poised upon black rings; rear median eyes smallest of the group, and away from their lateral neighbours; they are also widely removed from each other (Pl. xxi., fig. 45). *Legs*.—Sturdy, not long, yellow-brown, clothed with long black bristles, but displaying naked patches; tibiae and metatarsi i. and ii. armed with long, moderately strong spines, and those of legs iii. and iv. with a few rather short ones; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Similar in colour, clothing and armature to legs i. and ii.; tarsus scopulated. *Falces*.—Concolorous with legs, shining, clothed with coarse bristles, but displaying naked patches; *rastellum* consists of three transverse rows of teeth; inner ridge of the furrow of each falx armed with eight strong teeth, and the outer with six; in addition to these there is at the base an intermediate row of four very small teeth. *Maxilla*.—Shining, yellow-brown, hairy, arched, heel well rounded, inner angle obtusely pointed at apex, no spines present. *Labium*.—Concolorous, normal, shining, arched, hairy, submerged. *Sternum*.—Pyriform, concolorous also, uneven, moderately arched, hairy, anterior and intermediate *sigilla* marginal; posterior pair large, submarginal. *Abdomen*.—Obovate, arched, hairy, slightly overhanging base of cephalothorax, chocolate-brown mottled with yellow; four lung spots

present, distinct and yellow; beneath the second pair there are two moderately large, faintly distinct elliptical yellow spots, and beneath these again three faintly discernable recurved, transverse yellow bars; inferior surface dull yellow, densely hairy (Pl. xxi., fig. 46). *Spinnerets*.—Yellow, hairy; first joint of superior pair longest, the third shortest and dome-shaped.

Obs.—The collection contains two specimens, one of which (probably gravid) is stouter than that selected for the type. The eye formula bears a strong superficial resemblance to Cambridge's *A. latior*, but it may be easily distinguished therefrom by the intermediate eyes of the rear row being decidedly closer to their lateral neighbours, and also distinctly smaller than those of the second row.

Hab.—Reed Beds, near Adelaide (August, 1911), and Port Augusta, South Australia.

AGANIPPE MODESTA, *sp. nov.*

(Pl. xiii., figs. 4 and 5, and Pl. xxi., figs. 47 and 48.)

♀. Cephalothorax, 7.6 mm. long, 5.7 mm. broad; abdomen, 10.5 mm. long, 7.7 mm. broad.

Cephalothorax.—Obovate, yellowish grey, moderately clothed with fine, pale downy hairs. *Pars cephalica* ascending, arched, pencilled down the middle where there is a row of short, stiff, black bristles, and also laterally at posterior extremity, segmental groove distinct; *ocular area* rather broader than long, raised, arched, smoky brown, and furnished in front with a tuft of short black bristles; *clypeus* hyaline, very broad, sloping well forward, deeply indented at middle. *Pars thoracica* arched, retreating rearwards, radial grooves distinct; *thoracic furca* deep, procurved; *marginal band* undulated, pallid, and fringed with a few rather long, fine hairs. *Eyes*.—Distributed over three rows of 2, 2, 4; anterior pair largest of the group, and separated from each other by a space equal to that of rather more than once their individual diameter; intermediate pair very small, round, and separated from each other by a space equal to once their own individual diameter; rear row procurved on its front line and recurved behind; lateral eyes elliptical, very slightly smaller than those of its front row, poised obliquely, and ringed with black; intermediate eyes minute, elliptical, widely removed, each one touching the outer ring of its lateral neighbour (Pl. xxi., fig. 47). *Legs*.—Concolorous with cephalothorax, rather short, strong, hairy but displaying naked areas, each ambulatory limb armed with a few not very strong black spines; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour, clothing and armature to legs; tarsus scopulated. *Falces*.—Projected well forward, shining, yellow brown, each pencilled at upper inner angle and laterally with dark brown, clothed with fine dark brown hairs and long coarse bristles, but displaying extensive naked areas; inner angle of the furrow of each falx armed with five strong teeth; *rastellum* consists of a number of strong teeth distributed over an extensive area; *fang* dark brown, shining, well curved. *Mawille*.—Reddish-brown, arched, hairy, well rounded at heel; lower area of inner

angle furnished with a few small spines; apex obtusely pointed. *Lobium*.—Rather darker than foregoing, broader than long, arched, hairy, no spines visible. *Sternum*.—Yellowish-grey, moderately arched, clothed with black bristles, pyriform, undulated laterally and terminating obtusely between fourth pair of coxæ; posterior sigilla round, and away from margin. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, well arched, moderately hairy; superior surface darkish yellow brown spotted with yellow; sides concolorous; inferior surface yellowish, hairy; when immersed in spirit a faint dorsal design is noticeable (Pl. xxi., fig. 48). *Spinnerets*.—Yellow, hairy; superior pair stout, first joint much the longest, the third shortest and dome-shaped; inferior spinners short, stout, apices rounded, and separated from each other by a space equal to once their individual transverse diameter.

Hab.—Black Hill, Mount Lofty, South Australia (November 18, 1917).

AGANIPPE ORNATA, sp. nov.

(Pl. xxi., figs. 49 and 50.)

♀. Cephalothorax, 5.6 mm. long, 4.3 mm. broad; abdomen, 7.6 mm. long, 4.7 mm. broad.

Cephalothorax.—Obovate, yellow-brown, shining, clothed with long, yellowish, silky hairs. *Pars cephalica* high, ascending, slightly compressed at sides, segmental groove well defined; *ocular area* elevated, arched, black; *clypeus* broad, deep, hyaline, sloping forward, undulating. *Pars thoracica* arched, uneven, retreating towards posterior angle, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* black, undulating. *Eyes*.—Distributed over three rows of 2, 2, 4; anterior pair largest and separated from each other by a space equal to two-and-a-half times their individual diameter, somewhat elliptical, seated obliquely, and poised upon black rings; the second or intermediate pair round, and separated from each other by a space equal to once their individual diameter; posterior row procurved on its inner line and recurved at the rear; side eyes of this row smaller than those constituting the anterior pair, elliptical, oblique, and poised upon black rings; rear intermediate eyes widely separated, small, each touching its lateral neighbour (Pl. xxi., fig. 49). *Legs*.—Moderately long, hairy, tapering, yellow; patellæ i. and ii. each marked with a large and prominent black patch on their outer angle, and broadly pencilled with black on their inner; tibiæ, metatarsi and tarsi i. and ii. broadly pencilled with black on either side; each tibia, metatarsus and tarsus armed with black spines, those on the two first pairs being much the longest and strongest; metatarsi and tarsi i. and ii. scopulated; scopula divided; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, moderately strong, similar in armature and colour to legs i. and ii. *Falces*.—Projected well forward, concolorous with cephalothorax, hairy, but displaying naked patches; *rastellum* consists of three transverse rows of teeth; inner ridge of the furrow of each falx armed with a row of seven strong teeth; outer ridge devoid of teeth; between the two ridges there is an intermediate row of eight very small teeth. *Maxillæ*.—Yellow-brown, shining, arched,

hairy, heel well rounded, inner angle obtusely pointed at apex. *Labium*.—Normal, free, concolorous, arched, hairy. *Sternum*.—Pyriform, concolorous also, moderately arched, sparingly hairy; posterior *sigilla* largest, submarginal. *Abdomen*.—Ovate, slightly overhanging base of cephalothorax, clothed with long yellow hairs; superior surface black, marked with five broad, recurved, transverse, yellow bars; inferior surface dull yellow-grey, hairy (Pl. xxi., fig. 50). *Spinnerets*.—Concolorous, hairy; first joint of superior pair longest, third shortest and dome-shaped; inferior pair small, and separated from each other by a space equal to rather more than once their individual diameter.

Hab.—Bidsvold, Queensland.

AGANIPPE PELOCHROA,³ *sp. nov.*

(Pl. xxi., fig. 51.)

♀. Cephalothorax, 8 mm. long, 7·2 mm. broad; abdomen, 10·2 mm. long, 8·9 mm. broad.

Cephalothorax.—Obovate, yellow-brown, arched, sparingly clothed with short fine yellowish hairs and long, dark bristles. *Pars cephalica* ascending, compressed laterally, segmental groove distinct; *ocular area* broader than long, furnished in front and at rear with a few long bristles; *clypeus* broad, sloping forward, slightly excavated at middle, hyaline. *Pars thoracica* uneven, retreating, radial grooves broad and moderately deep; *thoracic fovea* deep, procurved; *marginal band* broad, reflexed, undulated, and fringed with fine hairs. *Eyes*.—Distributed over three rows of 2, 2, 4 each. Anterior pair just touching edge of clypeus, elliptical, poised obliquely, and once-and-a-half their own individual diameter apart; intermediate pair slightly smaller, round, once their own individual diameter apart; each is again removed from its anterior neighbour by about once the diameter of one of the latter eyes; rear row of eyes form a slightly recurved line behind, and a procurved line in front; rear lateral eyes largest of the group, elliptical, and poised obliquely; rear intermediates small, somewhat elliptical, and widely separated from each other; each is also fully once its own individual diameter away from its lateral neighbour (Pl. xxi., fig. 51). *Legs*.—Concolorous with cephalothorax, short, stout, clothed with long dark hairs, but displaying naked areas, and armed with short, stout spines; tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, strong, similar in colour, clothing and armature to legs. *Falces*.—Strong, projecting well forward, shining, reddish-brown, clothed with fine hairs and coarse bristles, but displaying naked areas; *rastellum* spread over an extensive area; lower ridge of the furrow of each falx armed with a row of six strong teeth and the upper with a row of ten smaller teeth; between these rows there is, near the base, an intermediate series of three or four minute teeth; beard, red; *fang* long, dark brown, shining, well curved. *Maxillæ*.—Shining, reddish-yellow, arched, well rounded at heel: the latter not

³ πηλοχρῶς = Clay-coloured.

excavated, clothed with long, dark hairs, and furnished at inner angle near the base with a small cluster of spines; beard yellowish-red. *Labium*.—Concolorous, arched, submerged, short, broader than long, slightly excavated at apex where it has a fringe of stiff bristles; no spines present; a few hairs distributed over the surface. *Sternum*.—Yellow, somewhat pyriform, arched, hairy; posterior *sigilla* large, and away from the margin. *Abdomen*.—Broadly obovate, arched, moderately overhanging base of cephalothorax, clay-yellow, hairy, and marked on superior surface with four muscle spots. *Spinnerets*.—Yellow, hairy, superior pair short, stout, basal joint largest, and the terminal minute and dome-shaped; inferior spinners minute, and separated from each other by about one-half their own individual transverse diameter.

Hab.—Mount Lofty, South Australia.

Genus Anidiops, Pocock.

ANIDIOPS MANSTRIDGEI, Pocock.

(Pl. xxi., figs. 52, 53, 54.)

Anidiops manstridgei, Pocock, Ann. Mag. Nat. Hist. (6), xix., 1897, p. 114; Hogg, Proc. Zool. Soc., 1901, p. 231; *Op. cit.* 1902, p. 125, pl. xiii., fig. 9.

Up to the publication of this paper the female of this species only was known, and that was described from a dried specimen in the British Museum as quoted above. In the material collected by Dr. Pulleine there are half a dozen females and two males, three of the former being adult, and three immature; of the mature forms there is one in excellent condition from Port Augusta West, South Australia, which, together with the other specimens bears out Pocock's description, and, except in point of size, Hogg's supplementary remarks and figure. The largest specimen under review shows the following measurements:—Cephalothorax, 11·8 mm. long, 9·5 mm. broad; abdomen, 13·7 mm. long, 10 mm. broad. The type came from Lawler's, East Murchison Goldfields, West Australia. All the examples before us are from South Australia.

Included in the collection are two male specimens from Mallala, South Australia. Both of these are fully developed, and bear a strong superficial resemblance to the males of *Aganippe pulleinei*, Hogg, and *A. subtristis*, O. P. Cambr., but are easily distinguished therefrom by the eye formula. The description is as follows:—

♂. Cephalothorax, 8·8 mm. long, 7 mm. broad; abdomen, 8·4 mm. long, 4·3 mm. broad.

Cephalothorax.—Obovate, yellow-brown, setose. *Pars cephalica* strongly arched, truncated in front, thoracic groove strongly impressed; *ocular area* raised, rather broader than long, well arched; *clypeus* deep, hyaline. *Pars thoracica* broad, moderately arched, radial grooves broad, deep; *thoracic fovea* deep, procurved; *marginal band* pallid, closely fringed with strong, black setæ. *Eyes* arranged in two rows of four each;

anterior row strongly, and the posterior row well procurved; anterior side eyes touching margin of clypeus, elliptical, obliquely placed, and separated from each other by a space equal to about one-half their individual diameter; intermediate eyes round, rather smaller than their lateral neighbours; rear side eyes as large as their anterior laterals, elliptical, and obliquely placed; rear intermediate eyes small, each close to, but not touching, its lateral neighbour (Pl. xxi., fig. 52). *Legs*.—Long, moderately strong, yellow, tapering; each coxa and limb thickly studded with strong black spines, those on the underside of each tibia and tarsus being much the longest and strongest; tarsi i. and ii. scopulated; on tibia i. there is an apophysis (Pl. xxi., fig. 53); relative lengths: 4, 1=2, 3. *Palpi*.—Moderately long, hairy; tibial joint inflated and furnished with an apophysis, the crest of which is spined; tarsal joint reddish, densely hairy, and terminating in front in an obtuse point; palpal bulb reddish, round, hollowed underneath where it is yellowish; stigma long, tapering, acuminate, grooved down the middle to near the centre (Pl. xxi., fig. 54). *Falces*.—Moderately projecting and moderately strong, hairy, but displaying naked patches, dark brown; *rastellum* present, not strong; outer ridge of the furrow of each falx armed with eight teeth and the inner with six; in addition to these there is an intermediate row of five or six very small teeth. *Maxillæ*.—Yellow, arched, hairy, heel well rounded; no teeth present. *Labium*.—Concolorous, short, broad, arched, submerged beneath base of maxillæ, moderately hairy. *Sternum*.—Pyriform, concolorous with labium, arched, moderately hairy, and furnished with setæ; *sigilla* orange-coloured, the anterior marginal; posterior pair largest, in a line between second and third coxæ, and removed from margin. *Abdomen*.—Ovate, slightly projecting over base of cephalothorax, superior surface yellow-brown, hairy, thickly beset with fairly strong spines; inferior surface yellow, hairy. *Spinnerets*.—Superior pair stout, hairy, yellow, first joint longer than second and third combined; the latter shortest and domed; inferior spinners cylindrical, short, and removed from each other by a space equal to fully twice their individual diameter.

Hab.—Two males from Mallala (May, 1910); females from Port Augusta (July 24, 1910); Ambleside (formerly Hahndorf) (November, 1909); and Collinsdale, Burra, South Australia.

Genus Gains, *Rainbow*.

GAIUS HIRSUTUS, *sp. nov.*

(Pl. xxi., fig. 55.)

♀. Cephalothorax, 13.1 mm. long, 10.8 mm. broad; abdomen, 15.9 mm. long, 11.4 mm. broad.

Cephalothorax.—Obovate, yellow-brown, shining, thickly (but not densely) clothed with fine yellowish hairs. *Pars cephalica* arched, ascending high (but not so much so as in *Missulena*, Walek.), sides steep; thoracic groove well defined; *ocular area* raised, arched, broader than long, smoky-brown, furnished with a few long bristles; *clypeus* hyaline, broad, sloping, deeply indented at the middle, and having in front of the eyes a

tuft of long, black bristles. *Pars thoracica* moderately broad, arched, retreating rearwards, radial grooves distinct; *thoracic fovea* deep, strongly procurved; *marginal band* broad, sinuous, pallid. *Eyes*.—Distributed over three rows of 2, 2, 4; rear row procurved; anterior eyes large, round; lateral eyes of rear row large, somewhat elliptical, of equal size to those of the front pair, oblique and slightly raised on black rings; front eyes separated from each other by a space equal to once-and-a-half their individual diameter, and from their median neighbours by a space equal to about that of one diameter; median eyes round, small, and separated from each other by a space equal to about once their own individual diameter; rear median eyes round, smaller than the foregoing, widely removed from each other; each is also separated from its lateral neighbour by a space equal to rather more than once its own diameter (Pl. xxi., fig. 55). *Legs*.—Yellow-brown, short, sturdy, thickly clothed with long, coarse bristles, but displaying naked areas; each tibia and metatarsus armed with rather long, moderately strong spines; coxæ long, hairy; metatarsi and tarsi i. and ii. thickly scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Similar in colour and clothing to legs; tibia and tarsus bespined; the latter thickly scopulated. *Falces*.—Projecting well forward, shining, mahogany-brown, densely clothed with long, coarse bristles, but displaying naked areas; *rastellum* consists of a series of strong teeth spread over a rather extensive area; inner ridge of the furrow of each falx armed with seven strong teeth, and the outer with six; in addition to these there is an intermediate row consisting of about a dozen smaller teeth; of the latter those nearest the base are the smallest. *Mucillæ*.—Long, broad, arched, hairy, reddish-brown, heel well rounded, apex of inner angle projected forward, and terminating in an obtuse point; lower portion of inner angle fringed with a beard of long, yellow-grey hairs, and the upper with a beard of red hairs. *Labium*.—Concolorous, shining, arched, free, broader than long, submerged beneath maxillæ, apex procurved, and fringed with coarse bristles. *Sternum*.—Pyriform, elongate, yellow-brown, moderately arched, hairy, terminating in a sub-acute point between fourth pair of coxæ; surface clothed with long, coarse bristles; anterior *sigilla* marginal, intermediate pair submarginal, posterior pair large and removed from margin. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, yellow-brown, arched, hairy. *Spinnerets*.—Short, stout, hairy, concolorous; first joint of superior pair much the longest, and the third minute and dome-shaped; inferior spinners somewhat coniform, and separated from each other by a space equal to about one-half their individual diameter.

Obs.—This is the second species recorded to the genus *Gaius*, Rainb. The first one came from Minnivale, West Australia, and its trap-door was recorded by Mr. W. B. Alexander, as being thin, of the wafer type, but having a few twigs incorporated in its upper surface round the edges.⁴ In respect of the genus itself its natural position should be immediately after *Anidiops*, Pocock.

Hab.—Port Augusta (July, 1909), South Australia.

⁴ Rainbow.—Rec. Austr. Mus., x., 1914, p. 198.

*Genus Blakistonia, Hogg.**BLAKISTONIA AUREA, Hogg.*

(Pl. xiii., fig. 8, Pl. xiv., fig. 6, and Pl. xv., fig. 7.)

Blakistonia aurea, Hogg, Proc. Zool. Soc., 1902, p. 132, pl. xiii., figs. 1 and 2, and text figs. 25*b-e*.

Obs.—Judged by the number of specimens collected, and the wide range of localities from which they were obtained, this is the commonest Ctenizid in South Australia. Younger specimens are much brighter than the more aged examples. In some specimens the upper surface of the abdomen (female) is sprinkled with groups of very dark spots which when viewed by the naked eye, and in spirit, have the appearance of chevrons.

Blakistonia aurea, Hogg, is the common Ctenizid of the Adelaide Plains. Here it attains its largest size, and the nests as figured are closed by lids which may attain the size of $2\frac{1}{2}$ cm. in diameter.

In favourable situations they are very common. In uncultivated land between Adelaide and the sea there are places where several can be found to the square yard (Pl. xiii., fig. 8), and the whole *Blakistonia* population of the plains must be immense. The economic value of this spider in such great numbers may be easily imagined when we consider that its nocturnal habits enable it to capture larval locusts and dispose of a great number.

In the cultivated lands the tendency of the frequent disturbance is to drive the spiders to the shelter of the fences, and in these positions we find them largely along the highways leaving the city in every direction. Plantations, and especially under pine trees, are favorite spots, but they are often found on hard, much frequented paths. In wet weather the partial filling up of the tube with water does not seem to inconvenience the spider much, and at the back of the Port River, and the reed beds, Adelaide, specimens are found in great abundance in ground that may be submerged for days together.

In the summer, at any rate on the plains, the spider seals its door down by a collar of web reaching from the side of the tube to the margin of the door. This it does to prevent dessication from the air and to protect itself against the parasitic wasps which occasionally use it as food for their larvæ. That this happens is made certain by the occurrence of pupa cases in the empty burrow. At the approach of autumn the nests are unsealed and the lids can be lifted as before. The collar, however, remains as evidence of its having been sealed down.

The male is rarely found in the nest. Most of those found have been collected under stones in cold, wet wintry weather. About April the egg bag is prepared and the eggs laid; the bag is of white silk of a long rectangular form like an ordinary pillow, and is suspended from the sides of the tube by diagonally opposite corners. The height, in one cast, was 2 inches, and the peculiar way of suspending it allows the spider to pass up and down the tube. In June, one of the writers [R.H.P.] found the bag empty and lying detached in the bottom of the tube with first casts inside it and the second on the surface. In the nest, with the mother

are the brood of young ones and they seem to remain there for some months before leaving to form nests in the vicinity of the home. The first nests formed by spiders are only slightly larger than those found in the tube with the mother; the burrows are very small and possess no door; probably this stage is after the third cast. The nest is simply an open tube near these and only little larger are tubes provided with minute doors. From this on, the tubes are enlarged by simply cleaning out and relining and adding concentrically to the door. In original doors the minute one of the first nest may often be traced as the nucleus.

The clearing out process is often undertaken in damp weather, and the first autumn rains are the period of greatest activity. The nests often being surrounded with small fragments of clay and soil, making them appear like anthills. Sometimes, however, the old door is discarded and a new one built. In this case, if built by an adult it is started from the hinge along its whole length, just as it is if the lid had been experimentally removed for observation.

At certain places in the hill country (Mylor, Pewsey Vale, South Australia), the younger nests at least exhibit lids with interlocking dentations into the mouth of the tube. Perfect as the ordinary door is, this modification must make a much greater call on the ingenuity of the Blakistonians which are mostly immature.

The female spider is a singularly sluggish animal making no attempt to defend itself unless irritated, when it stands on its hinder two pairs of legs and strikes in the characteristic attitude of the Territellariæ.

Hab.—Mitcham, Adelaide (October 26, 1917), Bridgewater (October, 1911), Black Hill, Port Augusta, Port Augusta West (July 24, 1907), Pichi Richi, Leviston, Hope Valley (April, 1908), Canowie (April, 1908), Mallala (April, 1908), Yarcowie, Kalkabury, York Peninsula (March, 1908), Oaklands, Kingswood, Woolshed Flat, South Australia; Broken Hill, New South Wales.

Group ARBANITEÆ.

Genus *Dyarcyops*, Hogg.

Dyarcyops andrewsi, Hogg, and *D. birói*, Kulcz., were, until the publication of this paper, the sole representatives of the genus to which they belong, and to these are now added three more, viz., *D. melancholicus*, *D. ionthus* and *D. maculosus*, each of which is from the vicinity of Sydney. Of these, the first-named, was collected at Clifton Gardens, on the north side of Sydney Harbour, by one of us [R.H.P.], who also collected the last-named at La Perouse, Botany Bay, just as this portion of the paper was being put into type, the second was collected by Mr. Danvers Power, from his garden at Burwood. Judging by *D. ionthus* Hogg's definition of the genus will have to be amended so as to read:—"Thoracic fovea deep, long, straight or slightly procurved." In every respect, save that of the fovea, *D. ionthus* conforms to the original description of the genus.⁵

⁵ Hogg—Proc. Zool. Soc. Lond., 1902, p. 130.

DYARCYOPS ANDREWSI, Hogg.

Dyarcycops andrewsi, Hogg, Proc. Zool. Soc., 1902, p. 130, pl. xiii., fig. 10, and text fig. 25a.

Hab.—Aldgate (May, 21, 1910), Strathalbyn (March 20, 1905), and Keith, South Australia (May 6, 1914).

DYARCYOPS BIROI, Kulcz.

(Pl. xiv., fig. 9.)

Dyarcycops birói, Kulcz., Ann. Mus. Nat. Hung., vi., 1908, p. 435.

Obs.—Although the specimen now under review is larger than Kulczński's type, and differs in certain minor details from that author's description, I have not much doubt but that the two are synonymous. At any rate until more specimens from New South Wales shall have been collected, I think it better to suspend final judgment.

Hab.—Kaiauga, Narooma, New South Wales (January, 1911).

DYARCYOPS MELANCHOLICUS, *sp. nov.*

(Pl. xii., fig. 10.)

♂. Cephalothorax, 8.1 mm. long, 7 mm. broad; abdomen, 8.1 mm. long, 5 mm. broad.

Cephalothorax.—Obovate, dark brown (nearly black), hairy, uneven. *Pars cephalica* arched, ascending, truncated in front, thoracic groove distinct; *ocular area* broader than long, raised, arched; *clypeus* deep, slightly inclined inwards, dark brown. *Pars thoracica* rather broad, arched, radial grooves deep; *thoracic fovea* deep, straight; *marginal band* undulating, dark brown, fringed with long hairs. *Eyes.*—Distributed over two rows of four each; front row strongly procurved; rear row procurved; lateral eyes of front row largest of the group, and separated from each other by a space equal to three times their individual diameter, ringed with black, and poised obliquely; intermediate pair smaller, and once their own individual diameter apart; posterior laterals somewhat elliptical, rather smaller than their anterior lateral neighbours, and poised obliquely; rear intermediate eyes minute, widely removed from each other: each touches the ring of its outer neighbour (Pl. xii., fig. 10). *Legs.*—Long, tapering, concolorous with cephalothorax, hairy; tibia i. furnished with an apophysis; tibiæ and metatarsi bespined; *metatarsus and tarsus of each leg scopulated*; relative lengths: 4, 1, 2, 3. *Palpi.*—Concolorous with legs, and similar to them in clothing; tibia short, inflated, and furnished with an apophysis; radial joint very short, armed at apex with a number of short, stout spines; bulb shining, pear-shaped; stigma broad at base, channelled, tapering and terminating in a moderately long, slightly twisted style. *Falces.*—Concolorous with cephalothorax, projected, moderately strong, clothed with long, coarse bristles, but displaying naked areas; inner angle of the furrow of each falx armed with a row of five moderately strong teeth. *Maxillæ.*—Reddish-brown, hairy, slightly arched, devoid of spines, heel well rounded; inner angle fringed with a thick, red beard.

Labium.—Concolorous, rather longer than broad, arched, hairy. *Sternum*.—Pyriform, elongate, concolorous with foregoing, densely hairy, very slightly arched; *sigilla* small, marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, densely clothed with long, coarse hairs; superior surface and sides dark brown, nearly black; inferior surface yellowish, densely hairy. *Spinnerets*.—Normal, short, stout, hairy, yellowish.

♀. Cephalothorax, 10·7 mm. long, 7·9 mm. broad; abdomen, 9·4 mm. long, 8·2 mm. broad.

Except in point of size, natural sexual differences and the fact that metatarsi and tarsi i. and ii. only in the female are scopulated, the two sexes are remarkably alike. The front lateral eyes are four times their individual diameter apart, and the rear row is procurved. Proportionally the legs of the female are much shorter and stouter; the palpi are long, and similar to leg i. in clothing and armature; tarsus scopulated; the *clypeus* also slopes forward.

Hab.—Clifton Gardens, Sydney (August, 1910), New South Wales.

DYARCOPSIS IONTHUS,⁶ *sp. nov.*

(Pl. xxi., fig. 56.)

♀. Cephalothorax, 10·7 mm. long, 7·8 mm. broad; abdomen, 18 mm. long, 8·8 mm. broad.

Cephalothorax.—Obovate, elongate, arched, chocolate-brown, clothed with fine, down-lying, yellowish hairs. *Pars cephalica* moderately high, ascending, segmental groove distinct; *ocular area* raised, broader than long, dark brown, fringed in front with a few stiff bristles; *clypeus* broad, sloping forward, indented at middle, pallid, tinged with brown in front of eyes, at which there is also a tuft of stiff bristles. *Pars thoracica* not broad, uneven, retreating, radial grooves moderately distinct; *thoracic fovea* long, deep, slightly procurved; *marginal band* broad, pallid, sinuous, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each, the front row being strongly procurved, and the rear moderately so; front lateral eyes largest of the series, each rather more than once its own individual diameter from its median neighbour; front median eyes about once their own individual diameter apart; rear lateral eyes rather smaller than the anterior medians, and about twice their own individual diameter from their front lateral neighbours; rear medians very small, widely removed from each other, and each again separated by about one and a half its own diameter from its lateral neighbour (Pl. xxi., fig. 56). *Legs*.—Short, strong, clay-yellow, hairy but displaying naked areas, each armed with long, fine spines; metatarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3, the fourth leg being but slightly longer than the first. *Palpi*.—Moderately long, strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Falces*.—Dark brown, moderately projected, strong, arched, densely clothed with short, fine hairs and long, coarse bristles;

⁶ *ιονθος* = clothed with fine hairs.

inner ridge of the furrow of each falx armed with a row of ten strong teeth, and the outer with thirteen small ones; beard red; *fang* long, well curved, nearly black. *Maxillæ*.—Dark brown, arched, densely clothed with long hairs, heel well rounded; beard red. *Labium*.—Concolorous, short, broad as long, submerged, arched, hairy, apex straight, and fringed with long bristles. *Sternum*.—Concolorous also, arched, densely hairy, broadest opposite third pair of coxæ; anterior and median *sigilla* marginal, the posterior submarginal. *Abdomen*.—Oblong-obovate, slightly overhanging base of cephalothorax, arched, dark chocolate brown, densely clothed with fine dark hairs, and showing towards anterior extremity two well defined muscle spots. *Spinnerets*.—Clay-yellow, short, stout: the superior pair has the basal joint longer than the second and third combined; the third joint minute, dome-shaped; inferior spinners scarcely once their individual transverse diameter apart.

Obs.—No lid to nest.

Hub.—Burwood, Sydney (February 23, 1918), New South Wales.

DYARCYOPS MACULOSUS, *sp. nov.*

(Figs. 2 and 3.)

♀. Cephalothorax, 6·2 mm. long, 4·4 mm. broad; abdomen, 9·5 mm. long, 5·1 mm. broad.

Cephalothorax.—Obovate, arched, yellow-brown, clothed with fine silky hairs. *Pars cephalica* ascending, high, segmental groove distinct: *ocular area* broader than long, fringed in front with long, stout bristles; *clypeus* hyaline, sloping forward, undulating. *Pars thoracica* not broad, uneven, radial grooves distinct; *thoracic foræ* straight; *marginal band* broad, pallid, undulating. *Eyes*.—Distributed over two rows of four each, the front one being strongly procurved, and the rear moderately so: eyes of front row of equal size, round, the intermediate pair separated from each other by a space equal to that of fully once their own individual diameter, and each again from its lateral neighbour by somewhat less than that space; rear lateral eyes rather smaller than their anterior neighbours; rear intermediates much the smallest of the series, and each quite close to, but not touching its lateral neighbour (Fig. 2).

Legs.—Short, concolorous with cephalothorax, spined, densely hairy, but displaying naked areas: metatarsi and tarsi i. and ii. scopulated; superior claws long; relative lengths: 4, 1, 2, 3.

Palpi.—Long, similar in colour, clothing and armature to legs; tarsi scopulated.

Falces.—Dark brown, shining, moderately projected, strong, arched, densely clothed with dark brown hairs; inner ridge of the furrow of each falx armed with six strong teeth,

and the outer with seven smaller ones; between these two series there is at the base a double row of eight or nine minute teeth; *rastellum* consists of a couple of rows of stout teeth; *fang* long, dark brown, well curved. *Maxillæ*.—Dull yellowish, arched, shining, moderately hairy; beard long, foxy-red, heel well rounded. *Labium*.—Concolorous, short, arched, shining,

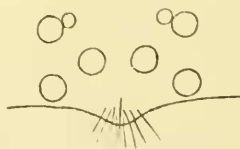


Fig. 2.

apex straight, and fringed with dark bristles. *Sternum*.—Concolorous also, hairy, arched, broadest between third pair of coxæ; *sigilla* small, round, yellow, posterior pair submarginal. *Abdomen*.—Obovate, not overhanging base of cephalothorax; arched; superior surface and sides yellow, flecked and spotted with chocolate-brown (Fig. 3), moderately hairy; immediately in front of *cinn. apigasteris* there is a rather large and prominent patch of orange-red. *Spinners*.—Yellow. First segment of superior pair longer than the second and third combined; terminal segment dome-shaped; inferior spinners short, and separated from each other by a space equal to once their own individual transverse diameter.



Fig. 3.

Hab.—La Perouse, Botany Bay, New South Wales (November 9, 1918).

Genus Arbanitis, L. Koch.

Three species only of this genus have up to the present been made known from Australia, viz., *A. longipes*, L. Koch, *A. maculipes*, Hogg, and *A. fuscipes*, Rainb., the first named hailing from Queensland, the second from Tasmania, and the third from New South Wales. Koch's species was described from a male only, but in 1914 one of the writers of this paper [W.J.R.] described that which he took to be the female. Two examples were recorded on that occasion, one being from Eidsvold, and the other from Burnett River, Queensland. The present collection contains another specimen from a locality near Eidsvold. To these nine additional forms are now recorded.

In elucidation of the species, we submit the following table:—

Front middle eyes about one half their individual diameter apart (<i>see</i> L. Koch).....	<i>A. longipes</i> , L. Koch.
Front middle eyes one third their individual diameter apart; thoracic fovea very deep, broad, slightly procurved.....	<i>A. fuscipes</i> , Rainb.
Front middle eyes nearly twice their individual diameter apart; thoracic fovea straight, but slightly curved round base of cephalic part.....	<i>A. maculipes</i> , Hogg.
Front middle eyes once their individual diameter apart, thoracic fovea slightly procurved; abdomen marked with broken transverse yellow bars.....	<i>A. gracilis</i> , sp. nov.
Front middle eyes about once their own individual diameter apart; thoracic fovea deep, procurved; abdomen chocolate brown with yellow markings and transverse bars.....	<i>A. festinus</i> , sp. nov.
Front middle eyes rather small, about once their individual diameter apart; thoracic fovea procurved; abdomen ornamented with yellow spots and markings.....	<i>A. similis</i> , sp. nov.
Front middle eyes fully once their individual diameter apart; thoracic fovea straight; abdomen chocolate brown marked with yellow.....	<i>A. pulchellus</i> , sp. nov.
Front median eyes three fourths their individual diameter apart; thoracic fovea straight; abdomen yellow, marked with chocolate brown.....	<i>A. elegans</i> , sp. nov.

- Front median eyes one half their individual diameter apart; thoracic fovea procurved, abdomen chocolate brown, spotted with yellow.....*A. inornatus*, sp. nov.
- Front median eyes not more than one half their individual diameter apart; thoracic fovea straight; abdomen densely hairy.....*A. hirsutus*, sp. nov.
- Front median eyes not more than one half their individual diameter apart; thoracic fovea straight; abdomen closely studded with papillæ, each of which carries a short black bristle.....*A. papillosus*, sp. nov.
- Front middle eyes of σ less than once their own individual diameter apart, and the front laterals, again, twice their own individual diameter from each other; tibial joint of palpus inflated and furnished with a spined apophysis. Front middle eyes of φ once their own individual diameter apart, and the front laterals three times their own individual diameter from each other.....*A. montanus*, sp. nov.

ARBANITIS ? LONGIPES, L. Koch.

Pholeuon longipes, L. Koch, Die Arach. des Austr., i., 1874, pp. 472 and 491, pl. xxxvi., figs. 3, 3a, 3b, 3c.

Arbanitis longipes, Hogg, Proc. Zool. Soc., 1901, p. 236; Rainb., Rec. Austr. Mus., iv., 1901, p. 7; *Op. cit.*, x., 1914, p. 213, figs. 26, 27.

Hab.—Near Eidsvold, Queensland.

ARBANITIS GRACILIS, sp. nov.

(Pl. xxii., figs. 57 and 58.)

φ . Cephalothorax, 8.5 mm. long, 5.5 mm. broad; abdomen, 11.5 mm. long, 6.7 mm. broad,

Cephalothorax.—Obovate, yellow-brown, pilose. *Pars cephalica* ascending, well arched, sides steep, compressed, thoracic groove well defined; *ocular area* raised, broader than long; *clypeus* deep, sloping forward, hyaline, indented at middle. *Pars thoracica* elongate, arched, uneven, radial grooves distinct; *thoracic fovea* very slightly procurved; *marginal band* pallid, undulating, fringed with a few fine hairs, and a few short, black bristles. *Eyes*.—Compact, distributed over two rows of four each; front row strongly procurved; anterior side eyes elliptical, poised obliquely, and separated from each other by a space equal to fully twice their individual diameter; anterior median eyes small, round, and separated from each other by a space equal to once their individual diameter; rear row distinctly procurved on the front line and strongly recurved at the rear; posterior laterals nearly as large as their anterior lateral neighbours, and poised obliquely; posterior medians minute, widely separated, each touching its outer neighbour; each eye of both series ringed with black; there is a dark, smoky patch between, and well to, the rear of anterior median eyes; front laterals quite close to margin of clypeus (Pl. xxii., fig. 57). *Legs*.—Concolorous with cephalothorax, strong, moderately long, hairy; metatarsi i. and ii. armed with six long, strong spines underneath, and tarsi i. and ii. with four rather short, stiff spines near the claws; leg iii. has the patella, tibia, and metatarsus strongly bespined in front and laterally, and the tarsus likewise underneath; patella iv. has a few short spines laterally; there are traces of spinal armature on tibia of leg iv.,

but the spines have been broken off; metatarsus and tarsus of the same leg strongly armed; spines on metatarsus very long; metatarsi and tarsi of legs i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour and clothing to legs, armed laterally with a few long, strong spines, tarsus scopulated; claw long. *Falces*.—Long, moderately strong, projected well forward, concolorous with cephalothorax, sides and apices clothed with long hairs; *rastellum* spread over a somewhat extensive area, the teeth strong; upper ridge of the furrow of each falx armed with four strong teeth, and the lower with six small ones; in addition to these there is an inner row consisting of three or four minute teeth; *juncus* long, well curved. *Maxilla*.—Yellow, moderately long, hairy, arched, obtusely pointed at base, inner angle bearded, and terminating at apical extremity in an obtuse point; there are a few small spines near the inner angle toward posterior extremity. *Labium*.—Short, broad, concolorous, submerged, arched, truncated, hairy, apex rounded; no spines present. *Sternum*.—Pyriform, arched, concolorous with foregoing, clothed with black bristly hair, posterior extremity terminating obtusely between fourth pair of coxae; *sigilla* orange-coloured, marginal. *Abdomen*.—Obovate, hairy, very slightly overhanging base of cephalothorax; superior surface chocolate brown with yellow markings; the first pair are seated well forward, are nearly round, and widely separated; the second pair are somewhat larger and elliptical; the third are larger still, but also elliptical; the three remaining yellow markings are broad and take the form of slightly recurved transverse bands (Pl. xxii., fig. 58); sides chocolate brown also with broad yellow markings interrupted with chocolate brown spots; these markings are associated with those on the upper surface; inferior surface ochreous yellow, moderately irrorated with small reddish-brown and chocolate spots. *Spinnerets*.—Superior pair chocolate brown, hairy; first joint longest, the third shortest and dome-shaped; inferior spinners concolorous, hairy, short, cylindrical, and separated from each other by a space equal to once their individual diameter.

Obs.—The type specimen was collected by one of us [R.H.P.], and the others by Mr. Chas. Danvers Power. Included among the latter is one that has newly cast its skin, and its predominant colour is pale green. The species displays some little variation in the yellow abdominal markings; in some examples they are broad, in others narrow. *A. gracilis* is common around Sydney. It may be looked for on both sides of the harbour. Some years ago one of us [W.J.R.] took it in the vicinity of Mrs. Macquarie's Chair and on the site where the power-house now stands at Rushcutters' Bay.

Hab.—Domain, Sydney; Burwood, Sydney (April, 1918), New South Wales.

ARBANITIS FESTIVUS, *sp. nov.*

(Pl. xxii., fig. 59.)

♀. Cephalothorax, 9.3 mm. long, 7.8 mm. broad; abdomen, 12.8 mm. long, 8.8 mm. broad.

Cephalothorax.—Obovate, reddish-brown, arched, moderately pubescent. *Pars cephalica* ascending, high, sides compressed, a row of bristles

running down the middle, segmental groove distinct; *ocular area* raised, broader than long, black, furnished in front with a tuft of bristles; *clypeus* hyaline, sloping forward, excavated at middle. *Pars thoracica* retreating, uneven, radial grooves broad and deep; *thoracic fovea* deep, procurved; *marginal band* broad, undulated, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each, the front row being procurved and the rear recurved; front side eyes largest of the group, elliptical, poised obliquely, and separated from each other by fully three times their own individual diameter; median eyes round, and separated from each other by a space equal to once their own individual diameter; posterior side eyes larger than their anterior lateral neighbours, elliptical, and poised obliquely; rear intermediates smallest of the group, nearly round, widely separated, each just touching its lateral neighbour (Pl. xxii., fig. 59). *Legs*.—Concolorous with cephalothorax, short, sturdy, hairy, but displaying naked areas, armed with powerful spines, those on legs i. and ii. being the strongest and most numerous; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Short, strong, similar in colour, clothing and armature to legs i. and ii.; tarsi scopulated. *Falces*.—Concolorous with cephalothorax, projected well forward, clothed with fine hairs and coarse bristles; inner ridge of the furrow of each falx armed with six strong teeth, and the outer with seven smaller ones; in addition to these there is an intermediate series of three minute ones; *fang* nearly black, shining, strong, well curved. *Maxilla*.—Yellow, arched, hairy, excavated round the lip, furnished with a cluster of spines at inner angle; heel well rounded. *Labium*.—Concolorous, short, broad, arched, apex slightly excavated and fringed with bristles; a few bristles distributed over surface. *Sternum*.—Concolorous also, narrow in front, broadest between third coxæ, and terminating obtusely between fourth pair of coxæ, arched, clothed with black bristles; posterior *sigilla* large, submarginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, hairy; superior surface chocolate-brown with yellow markings and transverse bars; inferior surface yellow, clothed with dark brown hairs. *Spinners*.—Yellow, hairy; superior pair stout, tapering, basal joint longer than the second and third combined, the latter minute and dome-shaped; inferior spinners very short, stout, and separated from each other by a space equal to fully once their own individual diameter.

Obs.—Several matured examples collected by one of us [R.H.P.]. Very like *A. gracilis* (*ante* p. 110), by its abdominal ornamentation, but it may be easily distinguished therefrom by its larger size and broader eye place. The entrance to the burrow is protected by a thick lid. The ova-sac is elliptical, composed of a thin white silken tissue, and is tough and strong. It is 2.5 mm. long, and 1.3 mm. wide.

Hab.—Mammip, Blackwood River, South West Australia (December 9, 1917.)

ARBANITIS SIMILARIS, *sp. nov.*

(Pl. xxii., fig. 60.)

♀. Cephalothorax, 8.7 mm. long, 7.2 mm. broad; abdomen, 10.7 mm. long, 7.2 mm. broad.

* *Cephalothorax*.—Obovate, yellow, moderately clothed with fine yellow downy hairs. *Pars cephalica* high, arched, ascending, segmental groove distinct, slightly compressed at sides; *ocular area* broader than long, raised, arched, dark brown; between and in front of the eyes there are a few moderately strong bristles; *clypeus* hyaline, moderately deep, sloping forward, indented at middle. *Pars thoracica* arched, uneven, retreating rearwards, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* pallid, fringed with long, fine hairs. *Eyes*.—Distributed over two rows of four each; front row procurved; second row recurved on its rear line, and procurved in front; anterior laterals slightly larger than their rear neighbours and separated from each other by a space equal to twice their individual diameter, somewhat elliptical, and poised obliquely on black rings; front medians rather small, round, and separated from each other by a space equal to once their own individual diameter; rear laterals rather smaller than their anterior lateral neighbours, elliptical, oblique, and poised upon black rings; rear medians smallest of the group, nearly round, and widely separated, each just touching its lateral neighbour (Pl. xxii., fig. 60). *Legs*.—Concolorous with cephalothorax, moderately long and strong, hairy, but displaying naked areas; tibiae, metatarsi and tarsi i. and ii. armed with stout spines, the metatarsal ones being much the longest; legs iii. and iv. are also similarly armed, but the spines are not so strong as those on the front legs; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, moderately strong, similar in colour, clothing and armature to legs i. and ii.; tarsus scopulated. *Palpes*.—Projecting, shining, yellow-brown, clothed with hairs and long, coarse bristles, but displaying large naked areas; *rastellum* consists of three transverse rows of strong teeth; inner ridge of the furrow of each falx armed with five strong teeth, and the outer with ten small ones, of which the basal four are decidedly the smallest; in addition to these there is at the base an intermediate row of four or five minute teeth. *Maxille*.—Yellow, shining, hairy, heel well rounded, no spines present. *Labium*.—Rather longer than broad, yellow, shining, arched, moderately hairy. *Sternum*.—Pyriform, yellow, hairy, moderately arched; posterior *sigilla* large and away from margin. *Abdomen*.—Ovate, slightly overhanging base of cephalothorax, arched; superior surface clothed with fine hairs and a few coarse bristles, yellow-brown, irrorated with small yellow spots; in addition to these there are two widely separated moderately large spots near the front; towards the middle there are two others which are rather larger and also widely separated; beneath these again there are two more, larger still, and elliptical in form; from thence toward the spinnerets there are four interrupted procurved, transverse yellow bars; inferior surface ochreous yellow, hairy. *Spinnerets*.—Short, concolorous, hairy; first joint of superior pair longest, the third shortest and dome-shaped; inferior spinners short, cylindrical, and separated from each other by a space equal to that of once their own individual transverse diameter.

Obs.—Superficially very similar to *A. gracilis*, sp. nov., but easily distinguished therefrom by its relatively broader prothorax.

Hab.—Kedron Brook, Brisbane, Queensland.

ARRAXITIS PULCHELLUS, *sp. nov.*

(Pl. xiv., fig. 11, and Pl. xxii., figs. 61, 62.)

♀. Cephalothorax, 11·6 mm. long, 7 mm. broad : abdomen, 14 mm. long, 8·8 mm. broad (Pl. xiv., fig. 11).

Cephalothorax.—Dark mahogany brown, pubescent, somewhat obovate. *Pars cephalica* strongly arched, raised, ascending, sides declivous, compressed, truncated in front; *ocular area* broader than long, raised, arched, fringed in front with short spines; *clypeus* deep, hyaline, indented at the middle. *Pars thoracica* uneven, arched, radial grooves distinct, sides undulating; *thoracic fovea* deep, straight; *marginal band* broad, pallid, fringed with black hairs. *Eyes*.—Arranged in two rows of four each; anterior row strongly procurved, rear recurved; the lateral eyes of front row largest of the group, somewhat elliptical, oblique, and separated from each other by a space equal to three times their individual diameter; anterior median eyes round, and separated from each other by a space equal to fully once their individual diameter; rear lateral eyes scarcely as large as their anterior median neighbours; rear median eyes smallest of the group and widely separated from each other; each is close to but does not touch its lateral neighbours; all eyes ringed with black (Pl. xxii., fig. 61). *Legs*.—Strong, moderately long, concolorous with cephalothorax, hairy, but displaying naked patches; each tibia, metatarsus and tarsus bespined, those on legs i. and ii. the longest and strongest; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, similar in colour, clothing and armature to leg i.; tarsus scopulated. *Falces*.—Projected well forward, dark brown, hairy, but displaying naked patches; outer margin of the furrow of each falx armed with eight strong teeth, and the inner with six smaller ones; between these there is an intermediate row consisting of two small teeth; *rastellum* consists of three transverse rows of teeth; *fang* long, well curved, shining, dark brown, almost black. *Maxilla*.—Reddish-brown, hairy, arched, heel well rounded, inner angle at anterior extremity terminating in an obtuse point, and obliquely directed; no spines present. *Labium*.—Concolorous, arched, hairy, anterior angle curved. *Sternum*.—Pyriform, arched, yellow, suffused at sides with brown; clothed with short black bristly hairs, posterior extremity terminating obtusely between fourth pair of coxæ; *sigilla* marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax; superior surface dark brown, marked down the middle with a narrow somewhat interrupted yellow line, on either side of which are yellow spots and markings, the latter having the appearance of broken transverse bands; sides dark brown also, with broken yellow markings; inferior surface hairy, yellow, marked laterally with dark brown spots (Pl. xxii., fig. 62). *Spinnerets*.—Yellow, hairy; superior spinners have the first joint much the longest, and the apical, which is domed, is shorter than the second; inferior spinners very short, and separated from each other by a space equal to once their individual diameter.

Hab.—Tambourine Mountain, Queensland.

ARAXITIS ELEGANS, *sp. nov.*

(Pl. xxii., fig. 63.)

♀. Cephalothorax, 9.1 mm. long, 7.4 mm. broad; abdomen, 10.5 mm. long, 9.4 mm. broad.

Cephalothorax.—Obovate, yellow-brown, rather well clothed with long, fine yellowish hairs. *Pars cephalica* arched, high, ascending, segmental groove well defined; *ocular area* broader than long, raised, arched, dark brown; *clypeus* sloping forward, hyaline, tinged with yellowish-brown at the middle, where it is slightly excavated. *Pars thoracica* moderately broad, radial grooves distinct; *thoracic fovea* moderately deep, straight; *marginal band* pallid, fringed with long, fine, yellowish hairs. *Eyes*.—Distributed over two rows of four each; front row well procurved, the rear recurved on its front line and recurved behind; eyes of front row of nearly equal size; front laterals slightly the largest, somewhat elliptical, and separated from each other by a space equal to fully two-and-a-half times their individual diameter, and the medians, which are round, from each other by about three-quarters of a diameter; rear lateral eyes smaller than those of the front row, somewhat elliptical, and poised obliquely; rear median eyes minute and widely separated from each other; each is close to but does not touch its lateral neighbour (Pl. xxii., fig. 63). *Legs*.—Moderately long and moderately strong, yellow-brown; the two front pairs have dark brown patches on the outer angles of their patellæ and tibiæ; each ambulatory limb densely hairy, but displaying naked areas; all are well armed with long black spines, those on leg iv. being the weakest; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, moderately strong, yellow-brown, densely hairy, and armed with long, strong spines; tarsus scopulated. *Falces*.—Projected, dark brown, densely clothed with short hairs and long coarse bristles, and displaying no naked areas; inner angle of the furrow of each falx armed with six strong teeth, and the outer with seven or eight very small ones; *rastellum* consists of two transverse rows of long, strong teeth; *fang* long, black, shining, moderately well curved. *Maxilla*.—Reddish-brown, densely hairy, arched, heel obtusely pointed, a few small scattered spines at base of inner angle, which latter has a beard of long yellow and red hairs. *Labium*.—Concolorous, longer than broad, hairy, arched, submerged and furnished with a few short spines. *Sternum*.—Rather broad, pyriform, arched, clothed with yellowish hairs and long black bristles and terminating obtusely between fourth pair of coxæ; *sigilla* marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, moderately clothed with short yellowish hairs and rather long, black bristles; superior surface and sides yellow, maculated with chocolate brown, some of the maculations being so grouped and disposed as to form gently recurved but interrupted transverse bars; inferior surface golden yellow, spotted with chocolate brown, hairy; the chitinous plate immediately above *rima epigastri* bright red in front. *Spinnerets*.—Golden yellow, hairy, basal joint of inferior pair twice as long as that of the second; third much the shortest and dome-shaped; inferior pair minute, close together.

Hab.—Kaianga, Narooma, New South Wales.

ARBANITIS HIRSETUS, *sp. nov.*

(Pl. xxii., fig. 64.)

♀. Cephalothorax, 8·9 mm. long, 7·1 mm. broad; abdomen, 7·2 mm. long, 5 mm. broad.

Cephalothorax.—Obovate, reddish-brown, moderately hairy. *Pars cephalica* strongly arched, ascending, somewhat compressed laterally, thoracic groove distinct; ocular area broader than long, raised, arched, furnished in front between anterior eyes with a few black bristles; *clypeus* hyaline, sloping forward, gently undulating. *Pars thoracica* moderately broad, arched, retreating towards posterior angle, radial grooves broad, distinct; *thoracic fovea* deep, straight; *marginal band* moderately broad, fringed with long hairs. *Eyes*.—Distributed over two rows of four each; front row strongly procurved: the rear recurved behind, and procurved in front; anterior and posterior side eyes largest, of equal size, elliptical, poised obliquely, and mounted on black rings; front lateral eyes very nearly touching edge of clypeus and separated from each other by a space equal to fully twice their individual diameter; anterior median eyes smaller than their lateral neighbours, round, ringed with black, and separated from each other by a space equal to not more than one-half their own individual diameter; rear median eyes smallest of the group, widely removed from each other, each just touching the ring of its lateral neighbour (Pl. xxii., fig. 64). *Legs*.—Concolorous with cephalothorax, clothed with coarse hairs and bristles, but displaying naked areas; tibiae and metatarsi armed with long, strong, black spines; on tarsus iii. there are six short spines; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour and clothing to legs; tibia armed with ten long, strong, black spines, and tarsus with two; the latter joint scopulated. *Falces*.—Concolorous with cephalothorax projecting, clothed with coarse hairs and bristles, but displaying naked areas; inner angle of the furrow of each falx armed with nine strong teeth, and the outer with seven small ones; *rastellum* consists of a couple of transverse rows of rather small teeth; *fang* long, shining, well curved, dark brown. *Maxilla*.—Reddish-brown, moderately arched, hairy, heel well rounded, at the inner basal angle there is a cluster of small spines. *Labium*.—Concolorous, longer than broad, arched, hairy, apex slightly excavated; no spines present. *Sternum*.—Concolorous with labium, pyriform, elongate, moderately arched, hairy; *sigilla* small, marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, chocolate brown, arched, densely hairy. *Spinnerets*.—Yellow, hairy, first joint of superior pair longest, the third shortest; inferior spinners cylindrical, very short, and separated from each other by a space equal to not more than that of once their individual transverse diameter.

Obs.—Probably a not fully grown example: nevertheless it is a very distinct form.

Hab.—Kedron Brook, Brisbane, Queensland.

ARBANITIS MONTANUS, *sp. nov.*

(Pl. xxii., figs. 65, 66, 67 and 68.)

♂. Cephalothorax, 6·8 mm. long, 5·5 mm. broad; abdomen, 6·7 mm. long, 3·8 mm. broad.

Cephalothorax.—Obovate, yellow-brown, moderately clothed with fine yellow hairs. *Pars cephalica* arched, ascending, segmental groove distinct; *ocular area* broader than long, arched, black, fringed in front with black bristles; *clypeus* hyaline, deep, sloping forward, deeply indented at middle. *Pars thoracica* arched, moderately broad, uneven, retreating rearwards, radial grooves distinct; *thoracic fovea* deep, very slightly recurved; *marginal band* undulated, pallid, fringed with rather coarse hairs. *Eyes*.—Distributed over two rows of four each; front row strongly procurved, the rear procurved in front and recurved behind; anterior laterals slightly larger than front medians and largest of the group, elliptical, mounted on black rings, poised obliquely, and separated from each other by a space equal to twice their individual diameter; anterior medians round, quite close together, ringed with black, rear laterals smaller than their anterior neighbours, elliptical, ringed with black, and poised obliquely; rear medians minute, widely separated, each touching its lateral neighbour (Pl. xxii., fig. 65). *Palpes*.—Projected, moderately strong, concolorous with cephalothorax, clothed with short hairs and long stiff bristles, but displaying naked areas; inner angle of the furrow of each palpus armed with six strong teeth and the outer with several minute ones. *Legs*.—Long, concolorous with cephalothorax, tapering, hairy, but showing naked areas; tibia i. furnished with an apophysis (Pl. xxii., fig. 66); each tibia and metatarsus bespined; metatarsi and tarsi i. and ii. scopulated; tarsi iii. and iv. are also scopulated; relative lengths: 1-4, 2, 3. *Palpi*.—Rather short, similar in colour and clothing to legs; tibia inflated, and furnished with a spined apophysis; tarsal joint small, and furnished at apex with a series of short spines; bulb bilobed, shining, pyriform, and terminating in a long, fine style; lobes mahogany brown; space between the latter yellow (Pl. xxii., fig. 67). *Maxillae*.—Arched, clay yellow, hairy, heel well rounded at base, inner angle fringed with an orange-yellow beard, the apex terminating in an obtuse point; no spines present. *Labium*.—Concolorous, moderately hairy, arched, broader than long. *Sternum*.—Pyriform, concolorous also, moderately arched, hairy; *sigilla* marginal. *Abdomen*.—Ovate, slightly overhanging base of cephalothorax, arched, hairy, superior surface yellow with dark brown markings and slightly recurved transverse bars; sides and inferior surface yellow, hairy. *Spinnerets*.—Concolorous, hairy, normal; inferior pair separated from each other by a space equal to once their individual transverse diameter.

♀. Cephalothorax, 10·2 mm. long, 7·2 mm. broad; abdomen, 13·4 mm. long, 8·2 mm. broad.

Cephalothorax.—Obovate, yellow-brown, moderately clothed with fine yellow hairs, uneven. *Pars cephalica* ascending, arched, segmental groove distinct; *ocular area* broader than long, raised, arched, fringed in front with a tuft of stiff bristles; *clypeus* pallid, tinged with yellowish at the middle, deep, sloping forward, moderately excavated at the middle, and furnished in front with a tuft of stiff bristles. *Pars thoracica* arched, radial grooves broad, distinct; *thoracic fovea* deep, straight; *marginal band* undulated, rather pallid, fringed with long, fine hairs. *Eyes*.—Distributed over two rows of four each; front row strongly procurved, the rear slightly procurved in front and distinctly recurved behind; anterior laterals largest of the group, very slightly elliptical, ringed with black, poised

obliquely, and separated from each other by a space equal to fully three times their individual diameter: anterior medians slightly smaller, round, ringed with black, poised obliquely, and separated from each other by a space equal to that of once their own individual diameter: rear laterals slightly smaller than their anterior lateral neighbours: they are also ringed with black, are elliptical, and poised obliquely: posterior medians minute, round, and widely separated, each one just touching its lateral neighbour (Pl. xxii., fig. 68). *Legs*.—Rather short, sturdy, concolorous with cephalothorax, densely hairy, but displaying naked areas: each ambulatory limb armed with a few strong spines: metatarsi and tarsi i. and ii. scopulated: relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour, clothing and armature to leg i., tarsus scopulated. *Palpes*.—Projected forward, moderately strong, darker in colour than cephalothorax, clothed with short hairs and long, coarse bristles: inner margin of the furrow of each palpus armed with a row of eight strong teeth, and the outer with a row of five small teeth; *rastellum* consists of three transverse rows of rather strong teeth; *fang* long, nearly black, well curved. *Maxillae*.—Dark reddish-brown, arched, hairy, heel well rounded, inner angle fringed with a beard of reddish hairs, and terminating at apex in an obtuse point: a few small scattered spines at base. *Labium*.—Concolorous, well arched, longer than broad, hairy, devoid of spines, apex excavated. *Sternum*.—Concolorous also, pyriform, arched, hairy, terminating obtusely between fourth pair of coxæ; *sigilla* small, first two pairs marginal, posterior pair submarginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, hairy; superior surface and sides yellow, irrorated with chocolate brown; inferior surface yellow, hairy. *Spinnerets*.—As in the male.

Obs.—One adult male, and several females in various stages of development were collected. In none of the latter is there any distinct design, although in some of the younger forms there are traces of chocolate brown transverse bars.

Hab.—Jenolan Caves, New South Wales.

ARBAXITIS PAPILLOSCA, *sp. nov.*

(Pl. xxii., fig. 69.)

♀. Cephalothorax, 10.2 mm. long, 7.7 mm. broad; abdomen, 12.4 mm. long, 9.6 mm. broad.

Cephalothorax.—Obovate, pilose. *Pars cephalica* raised, well arched, ascending, compressed laterally, thoracic groove well defined; *ocular area* broader than long, fringed in front with a tuft of stiff black bristles; anterior lateral eyes close to edge of clypeus; *clypeus* hyaline, moderately deep, sloping gently forward, undulated. *Pars thoracica* uneven, moderately arched, radial grooves distinct; at rear of thoracic fovea there are two depressions or pits; *thoracic fovea* moderately deep, straight; *marginal band* moderately broad, undulating, yellowish, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each; anterior row strongly procurved; rear row procurved in front, recurved behind; anterior and posterior lateral eyes of nearly equal size, the latter being slightly the smallest, elliptical, ringed with black, and poised obliquely; front lateral

eyes separated from each other by a space equal to that of four times their individual diameter; anterior medians largest of the group, round, and one-half their individual diameter apart; rear medians round, smallest of the group, widely separated, each touching its lateral neighbour (Pl. xxii., fig. 69). *Legs*.—Rather long, moderately strong, tapering, clothed with short, stiff, black hairs, but displaying naked patches; tibia, metatarsus and tarsus of each leg armed with moderately long, black spines; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, moderately strong, similar in colour and armature to legs; tarsi scopulated. *Falces*.—Rather short, moderately projecting, dark mahogany brown, thickly clothed with short hairs and stiff black bristles, but displaying naked patches; inner angle of the furrow of each falx armed with a row of seven strong teeth; outer angle armed with a row of nine small teeth, of which the three at the base are decidedly the smallest; between the two ridges there is an intermediate row consisting of three minute teeth; *castellum* rather weak; *fang* well curved, dark reddish-brown. *Maxilla*.—Yellow, hairy, obtusely pointed at base, and again at apex of inner angle; there is a small cluster of spines at base of inner angle. *Labium*.—Concolorous, rather longer than broad, arched, apex very slightly excavated, moderately clothed with stiff black bristles. *Sternum*.—Pyriform, arched, yellow, clothed with long black bristles, and terminating obtusely between fourth pair of coxæ; *sigilla* small, marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax; superior surface chocolate-brown, closely and thickly studded with small yellow papillæ, at the summit of each of which there is a small, black bristle; towards the middle there is a small, pale yellow patch, which latter has but few papillæ; below this there are two short, but widely separated, curved, transverse yellow bars; below the latter there are two larger ones, and below these again two others, between which there is a moderately large, irregular spot; sides and inferior surface yellow-brown, hairy. *Spinnerets*.—Yellow, hairy, basal joint smallest, dome-shaped; inferior spinners minute, once their individual diameter apart; apices obliquely truncated.

Obs.—This may hereafter form the type of a new genus, from the fact that the anterior median eyes are the largest of their group, the falces being only slightly projected, and the inferior spinnerets obliquely truncated. For the present, however, it is included in the genus *Arbanitis*.

Hab.—Tambourine Mountain, Queensland.

ARBANITIS INORNATUS, *sp. nov.*

(Pl. xxii., fig. 70.)

♀. Cephalothorax 9 mm. long, 6·8 mm. broad: abdomen 10·4 mm. long, 6·8 mm. broad.

Cephalothorax.—Obovate, uneven, reddish-brown with pale yellowish patches, pubescent. *Pars cephalica* raised, well arched, ascending, thoracic groove distinct, sides compressed, fringed with stout black bristles in front of eyes; *ocular area* broader than long; *clypeus* hyaline, sloping forward, moderately deep, slightly indented at the middle. *Pars thoracica*

moderately broad, arched, radial grooves distinct; *thoracic fovea* deep, very slightly procurved; *marginal band* moderately broad, hyaline, fringed with rather long black hairs. *Eyes*.—Arranged in two rows of four each; anterior row strongly procurved; posterior row recurved on its rear line and procurved in front; anterior and rear laterals elliptical, oblique, and of nearly equal size, the latter being slightly the larger; anterior laterals separated from each other by a space equal to about two-and-a-half times their individual diameter; anterior medians, one-half their individual diameter apart, round, large; rear medians small, widely separated, each one touching the black ring of its lateral neighbour; all eyes ringed with black (Pl. xxii., fig. 70). *Legs*.—Reddish-brown, sturdy, moderately long, densely clothed with long black bristles and fine hairs, but displaying naked patches; tibiae, metatarsi, and tarsi i. and ii. armed with long and powerful spines; those on tibiae, metatarsi and tarsi iii. and iv. much less stronger than the foregoing; this is most marked in respect of leg iv.: claws long; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, sturdy, similar in colour, clothing and armature to leg i. *Palpes*.—Moderately projecting, concolorous with cephalothorax, densely clothed with long, coarse hairs or bristles, but displaying naked areas; *castellum* consists of three transverse rows of strong teeth; inner ridge of each falx armed with eight strong teeth and the outer with ten smaller ones; between these ridges there is an intermediate row consisting of four minute teeth; *fang* long, well curved, nearly black. *Masilla*.—Reddish-yellow, arched, densely hairy, base obtusely acuminate; apex of inner angle terminating in a somewhat acuminate point; a few small spines present near the base. *Labium*.—Concolorous, arched, normal, hairy and furnished with a few small spines near the apex. *Sternum*.—Concolorous also, somewhat pyriform, clothed with long black bristles and hairs, and terminating obtusely between fourth pair of coxæ; *sigilla* marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, hairy, arched; superior surface chocolate-brown, irrorated with dull yellowish spots; sides and inferior surface much lighter in colour. *Spinnerets*.—Yellow, hairy, short, normal, inferior pair very short, and rather less than once their individual diameter apart.

Hab.—Eidsvold, Queensland.

Genus Tambouriniana, *gen. nov.*

Cephalothorax.—Obovate. *Pars cephalica* high (though not so much as in *Missuleua*, Walck.), ascending; *gular area* much broader than long. *Pars thoracica* widest at middle, retreating to posterior angle; *thoracic fovea* very deep and strongly procurved. *Eyes*.—Compactly grouped, distributed over two rows of four each; front row well procurved, the rear recurved behind, procurved in front. *Labium*.—Free, longer than broad, widest at base, apex slightly indented. *Sternum*.—Pyriform, broad; *sigilla* well marked, the first and second pairs marginal, the third well away from the margin. *Palpes*.—Both ridges of each falx armed with teeth. *Spinnerets*.—As in *Arbanitis*, L. Koch.

TAMBOURINIANA VARIABLEIS, *sp. nov.*

(Pl. xiv., fig. 12; Pl. xxii., fig. 71.)

♀. Cephalothorax, 15.5 mm. long, 12.5 mm. broad; abdomen, 17.8 mm. long, 11.3 mm. broad (Pl. xiv., fig. 12).

Cephalothorax.—Obovate, reddish-brown, shining, uneven, sparingly clothed with long, fine, yellowish hairs. *Pars cephalica* high, arched, ascending, slightly depressed behind ocular tubercle, sides steep, compressed, segmental groove profound; *ocular area* broader than long, raised, arched, fringed in front with a cluster of stout bristles; *clypeus* hyaline, deep, sloping forward, undulated. *Pars thoracica* broad, arched, sharply retreating rearwards, posterior angle narrow, radial grooves distinct, lateral and posterior angles reflexed; *thoracic fovea* profound, deep, well procurved; *marginal band* moderately broad, yellow, fringed with long, black bristles. *Eyes*.—Compactly grouped, distributed over two rows of four each, front row strongly procurved, rear row procurved in front, recurved behind; anterior laterals largest of the group, elliptical, obliquely poised, ringed with black, close to edge of clypeus, and separated from each other by a space equal to about three times their individual diameter; median eyes round, each separated from its anterior lateral neighbour by a space equal to about once its own individual diameter, and again from each other by about the same distance; rear laterals elliptical, distinctly smaller than their anterior neighbours, obliquely poised, ringed with black; rear medians round, smallest of the group, widely separated, each very close to but not touching its lateral neighbour (Pl. xxii., fig. 71). *Legs*.—Moderately long, very strong, reddish-brown, well clothed with hairs and long coarse bristles, but displaying naked areas; tibiae, metatarsi and tarsi i., ii., and iii. armed with short, strong black spines; tibia iv. has five very weak spines; metatarsus and tarsus iv. are armed with short strong black spines; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, very strong, similar in colour and clothing to legs; tibia and tarsus armed with short powerful spines; tarsus scopulated. *Falces*.—Projected forward, concolorous with cephalothorax, well clothed with short black hairs and stiff bristles, but displaying naked areas; inner angle of the furrow of each falx armed with eight strong teeth, and the outer with ten small ones; in addition to these there is between these two rows an intermediate series of ten minute teeth; *rastellum* consists of a large number of strong teeth distributed over an extensive area; *fang* long, shining, black. *Maxillae*.—Reddish-brown, arched, well clothed with long coarse hairs, basal angle well excavated, terminating in an obtusely pointed heel, and furnished at its upper area with a rather dense cluster of spines; inner angle fringed with a reddish beard, and terminating obtusely at apex. *Labium*.—Free, concolorous, shining, arched, longer than broad, narrower at apex, which is gently indented, moderately clothed with bristles and furnished with a few small spines. *Sternum*.—Broadly pyriform, moderately arched, concolorous with labium, sparingly hairy, terminating obtusely between fourth pair of coxae; *sigilla* large, the first and second pairs marginal, and the third seated well away from margin. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, hairy,

yellow brown. *Spinnerets*.—Short, sturdy, dull yellow, hairy; first joint of superior pair as long as the second and third joints combined; third joint very small, dome-shaped; inferior spinners minute, and separated from each other by a space equal to once their individual diameter.

Hab.—Tambourine Mountain, and Eidsvold, Queensland.

TAMBOURINIANA VARIABILIS, *var. FLAYOMACULATA, var. nov.*

♀. Cephalothorax, 14.3 mm. long, 11.2 mm. broad; abdomen, 16.4 long, 14.8 mm. broad.

The example selected for the type of this variety agrees in every particular except size and abdominal ornamentation with the typical form. The *abdomen* is obovate, well arched, slightly overhanging base of cephalothorax, hairy, chocolate-brown, relieved on the superior surface by a series of eight large yellow patches, arranged in pairs below the last of which there are two transverse bars near the spinnerets; in addition to these, numerous yellow spots are present. In fact, the yellow markings are so prominent and distinctive that a varietal denomination appears necessary, and so it is named as above.

Obs.—Several specimens, all females, in various stages of development were obtained. The subspecies, *flayomaculata*, shows considerable variation both in abdominal ornamentation and size.

Hab.—Tambourine Mountain, Kedron Brook, Brisbane and Eidsvold, Queensland.

Genus Albaniana, gen. nov.

Cephalothorax.—Obovate. *Pars cephalica* raised, though not so much as in *Tambouriniana, gen. nov.*, arched, ascending, *ocular area* broader than long, raised. *Pars thoracica* broad, retreating; *thoracic forea* deep, procurved. *Eyes*.—Distributed over two rows of four each; the two rows close together; anterior row procurved, rear row recurved. *Falces*.—Both ridges of the furrow of each falx armed with teeth. *Labium*.—Broader than long, free. *Sternum*.—Pyriform, broad; first and second pairs of *sigilla* marginal, the third away from margin. *Abdomen*.—Ovate. *Spinnerets*.—Short, but longer than in *Arbanitis* and *Tambouriniana*; superior pair extending beyond tip of abdomen.

ALBANIANA INORNATA, *sp. nov.*

(Pl. xxii., fig. 72.)

♀. Cephalothorax, 10.2 mm. long, 8.8 mm. broad; abdomen, 13.4 mm. long, 10 mm. broad.

Cephalothorax.—Obovate, uneven, yellow-brown, moderately clothed with fine yellowish hairs. *Pars cephalica* raised, ascending, arched, slightly depressed at rear of *ocular tubercle*, compressed laterally, segmental groove distinct; *ocular area* broader than long, raised, arched, black, and furnished in front with a tuft of stiff black bristles; *clypeus* hyaline, sloping forward, deep, indented at middle. *Pars thoracica* broad, arched, retreating gently towards posterior angle, radial grooves distinct;

thoracic fovea deep, well procurved; *marginal band* pallid, broad, undulating, fringed with fine yellowish hairs. *Eyes*.—Distributed over two rows of four each; the two rows close together; front row well procurved, the rear slightly procurved in front and also slightly recurved behind; anterior laterals largest of the group, elliptical, poised obliquely, and separated from each other by a space equal to three times their individual diameter; anterior medians considerably smaller, round, and separated from each other by a space equal to twice their own individual diameter; rear laterals rather smaller than their front lateral neighbours, elliptical, and poised obliquely; posterior medians widely separated, round, somewhat smaller than the anterior medians, close to, but not touching, their lateral neighbours (Pl. xx., fig. 72). *Legs*.—Moderately long, sturdy, concolorous with cephalothorax, densely hairy, but displaying naked areas, each ambulatory limb armed with short, stout spines, those on the two front pairs being much the strongest; metatarsi, and tarsi i. and ii. partially scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, very strong, similar in colour, clothing and armature to legs; tarsus partially scopulated. *Fulcres*.—Projected forward, concolorous with cephalothorax, well clothed with fine hairs and coarse bristles; inner ridge of the furrow of each falx armed with a row of nine strong teeth, and the outer with seven rather smaller ones; between these two rows there are at the base two or three minute teeth; *rastellum* consists of two transverse rows of rather strong teeth; *jung* black, shining, well curved. *Maxillæ*.—Reddish-brown, arched, hairy, basal angle excavated, furnished with a cluster of small spines, and terminating in an obtusely pointed heel; inner angle fringed with a beard of long, reddish hairs, and terminating at apex in an obtuse point. *Labium*.—Concolorous, free, well arched, shining, longer than broad, moderately clothed with long hairs, devoid of spines, apex gently rounded. *Sternum*.—Concolorous with labium, pyriform, broad, well arched, angles undulated, moderately clothed with stiff bristles, and terminating obtusely between fourth pair of coxæ; *sigilla* large, first and second pairs marginal, the third largest and away from margin. *Abdomen*.—Ovate, well arched, overhanging base of cephalothorax rather more than the majority of species, clay-yellow, hairy. *Spinnerets*.—Short, stout, yellowish, hairy, superior pair extending beyond tip of abdomen; of these the first joint is twice as long as that of the second, the third being very small and dome-shaped; inferior spinners very short, twice as long as broad, and quite close together—nearly touching.

Hab.—Albany Road, Narrogin, West Australia (May 22, 1912).

ALBANIANA ORNATA, *sp. nov.*

(Pl. xxii., figs. 73 and 74.)

♀. Cephalothorax, 8.8 mm. long, 7.4 mm. broad; abdomen, 11.5 mm. long, 8.2 mm. broad.

Cephalothorax.—Obovate, bright yellow, uneven, moderately clothed with rather long, fine, yellowish hairs. *Pars cephalica* well arched, ascending, truncated in front, furnished with a few black bristles at rear of ocular area, segmental groove distinct; *ocular area* much broader than long, black, raised, arched, and furnished in front with a tuft of black

bristles; *clypeus* hyaline, deep, sloping forward, undulated. *Pars thoracica* arched, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* pallid, undulated, fringed with long black hairs. *Eyes*.—Compactly grouped, distributed over two rows of four each; front row procurved, the rear slightly procurved in front, and slightly recurved behind; anterior lateral eyes largest of the group, elliptical, obliquely poised, ringed with black, and separated from each other by a space equal to rather more than twice their individual diameter; front median eyes round, ringed with black, and separated from each other by a space equal to rather more than twice their individual diameter; rear laterals considerably smaller than their anterior neighbours, ringed with black and poised obliquely; rear medians smallest of the group, round, widely separated from each other, and each just touching its lateral neighbour; the two rows of eyes close together (Pl. xxii., fig. 73). *Legs*.—Moderately long, sturdy, concolorous with cephalothorax, hairy, but displaying naked areas; each ambulatory limb armed with strong, black spines; metatarsi and tarsi i. and ii. scopulated: scopulae divided; relative lengths: 4, 1, 2, 3. *Palpi*.—Similar in colour, clothing and armature to legs i. and ii.; tarsal scopula divided. *Falces*.—Projected well forward, strong, concolorous with cephalothorax, clothed with dark hairs and long, coarse bristles; inner angle of the furrow of each falx armed with seven strong teeth, and the outer with twelve small ones: in addition to these there is an intermediate row of three minute teeth; *rastellum* consists of two rows of long, strong teeth; *jung* dark brown, shining, well curved. *Maxilla*.—Bright yellow, arched, hairy, heel well rounded, a cluster of small spines near the base, inner angle furnished with a beard of long, reddish hairs, and terminating at apex in a somewhat obtuse point. *Labium*.—Concolorous, rather longer than broad, arched, moderately hairy, a row of small spines near the apex, the latter very slightly concave. *Sternum*.—Pyriform, smoky yellow, hairy, terminating obtusely between fourth pair of coxae; posterior *sigilla* away from margin. *Abdomen*.—Ovate, slightly overhanging base of cephalothorax, well arched, hairy; superior surface yellow, marked down the middle with a broad dull green longitudinal band, from which there extends laterally transverse bars in eschalon, these latter vary in different specimens (Pl. xxii., fig. 74); sides and inferior surface yellowish-green, hairy. *Spinnerets*.—Yellow, hairy, first joint twice as long as that of the second; third joint, minute, dome-shaped.

Hab.—Eidsvold, Queensland.

ALBANIANA VILLOSA, *sp. nov.*

(Pl. xxii., figs. 75.)

♀. Cephalothorax, 11.9 mm. long, 9 mm. broad; abdomen 10.8 mm. long, 7 mm. broad; abdomen shrivelled.

Cephalothorax.—Obovate, moderately clothed with long, fine yellowish hairs, shining, mahogany-brown, uneven. *Pars cephalica* high, ascending, well arched, compressed at sides, segmental groove distinct; *ocular area* broader than long, fringed in front with a cluster of stiff bristles; *clypeus* hyaline, sloping forward, undulated. *Pars thoracica* arched, broad at

middle, radial grooves distinct; *thoracic fovea* deep, very slightly procurved; *marginal band* broad, undulated, fringed with long fine hairs. *Eyes*.—Compactly grouped, distributed over two rows of four each; front row procurved, the rear slightly procurved in front, and distinctly recurved behind; side eyes of both rows elliptical, ringed with black, and poised obliquely; front anterior eyes almost touching edge of clypeus, not larger than their posterior lateral neighbours, and separated from each other by a space equal to fully that of three times their individual diameter; front medians round, ringed with black, and separated from each other by a space equal to about one-half their own individual diameter; lateral eyes of both rows close together and nearly touching; rear intermediate eyes small, rounded, widely separated, and each touching its lateral neighbour (Pl. xxii., fig. 75). *Legs*.—Concolorous with cephalothorax, moderately long, sturdy, densely hairy, but displaying naked areas; each ambulatory limb armed with long, strong, black spines; metatarsi and tarsi i. and ii. scopulated; scopula divided; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, sturdy, similar in colour, clothing and armature to legs i. and ii. *Falces*.—Projected well forward, concolorous with cephalothorax, shining, moderately clothed with fine hairs, and long, coarse bristles; inner angle of the furrow of each falx armed with six strong teeth, and the outer with ten smaller ones; in addition to these there is an irregular and intermediate row consisting of about a dozen minute teeth; *rastellum* consists of a number of strong teeth spread over a rather extensive area; *jung* long, well curved, nearly black. *Maxillæ*.—Reddish-brown, long, arched, well rounded at beel, clothed with long, coarse hairs; the inner angle has a long reddish beard and a cluster of small spines near the base. *Labium*.—Concolorous, longer than broad, moderately clothed with long hairs, rounded at apex; there are also a few scattered spines. *Sternum*.—Broadly pyriform, yellowish, arched, clothed with long, coarse bristles; *sigilla* rather large, first and second pairs marginal, the third largest and away from margin. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, chocolate brown, densely clothed with long, coarse hairs. *Spinnerets*.—Yellowish, stout, hairy; first joint of superior pair longest, the third short and dome-shaped; inferior spinners short, cylindrical, rather more than once their individual diameter apart.

Hab.—Tambourine Mountain, Queensland.

ALBANIANA FLAVOMACULATA, *sp. nov.*

(Pl. xxii., fig. 76.)

♀. Cephalothorax, 8.9 mm. long, 7.5 mm. broad; abdomen, 11.2 mm. long, 7.5 mm. broad.

Cephalothorax.—Obovate, moderately pilose, yellow-brown. *Pars cephalica* high, ascending, well arched, compressed laterally, segmental groove distinct; *ocular area* much broader than long, nearly black, raised, arched, fringed in front with a tuft of black bristles; *clypeus* hyaline, broad, sloping well forward, deeply indented at middle. *Pars thoracica* broad, uneven, arched, retreating towards posterior angle, radial grooves broad, deep; *thoracic fovea* deep, well procurved; *marginal band* slightly

reflexed, pale yellowish, undulated, fringed with fine pale hairs. *Eyes*.—Distributed over two rows of four each; front row well procurved, the rear slightly procurved in front and slightly recurved behind; front lateral eyes elliptical, ringed with black, poised obliquely, and separated from each other by a space equal to fully three times their individual diameter; anterior intermediates round, small, and separated from each other by a space equal to rather more than once their own individual diameter; rear laterals as large as their anterior lateral neighbours, elliptical, poised obliquely, and ringed with black; rear intermediates widely separated, smallest of the group, but nearly as large as anterior intermediate eyes, slightly elliptical, ringed with black, each just touching outer ring of its lateral neighbour; both rows of eyes close together (Pl. xxii., fig. 76). *Legs*.—Rather short, sturdy, tapering, concolorous, with cephalothorax, densely hairy, but displaying naked areas; legs i. and ii. armed with a series of powerful, black spines, and legs iii. and iv. with a series of very weak ones; metatarsus iii., however, has three strong spines at its apical extremity; metatarsi i. and ii. scopulated, the scopula divided; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour and clothing to legs; tibia and tarsus armed with numerous powerful, black spines; tarsal scopula divided. *Falces*.—Projected well forward, shining, rich mahogany brown, clothed with short, black hairs and coarse bristles, but displaying naked areas; inner angle of the furrow of each falx armed with six strong teeth; and the outer with eight small ones; there are also two or three minute intermediate teeth at the base; *rastellum* consists of three transverse rows of strong teeth; *fang* nearly black, shining, well curved. *Mucilla*.—Yellow-brown, shining, hairy, arched, well rounded at heel, furnished with a few small spines at base of inner angle, the apex of which is obtusely pointed. *Labium*.—Concolorous, longer than broad, arched, somewhat coniform, no spines visible. *Sternum*.—Reddish-yellow, shining, arched, broadly pyriform, terminating obtusely between fourth pair of coxæ, clothed with coarse black bristles; posterior *sigilla* away from margin. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, moderately clothed with short fine hairs; superior surface yellow-brown ornamented with large yellow patches and small yellow spots; sides yellowish with faintly visible small, pale, somewhat elliptical markings; inferior surface yellow, hairy. *Spinnerets*.—Concolorous, hairy, the superior pair extending beyond tip of abdomen; of these, the basal joint is much the longest, the apical small and dome-shaped; inferior spinners short, rounded at apex, and separated from each other by a space equal to not more than once their individual transverse diameter.

Hab.—Albany Road, Narrogin (May 23, 1912), and Kalamunda, near Perth (May 16, 1912), West Australia; the latter immature.

Group EUOPLEÆ.

Genus Euoplos, Rainbow.

EUOPLOS SPINNIPES, Rainbow.

(Pl. xv., fig. 13; Pl. xvi., figs. 14 and 15.)

Euoplos spinripes, Rainbow, Rec. Austr. Mus., x., 8, 1914, p. 219, figs. 28—31.

Hab.—Eidsvold, Queensland.

Group NEMESIÆ.

Amongst the material collected by Dr. Thos. Bancroft, at Eidsvold, Queensland, there is a very pretty male spider, which, whilst being a true Ctenizid, differs from all Australian forms included in that series hitherto examined and studied by us. It has a rastellum and three claws, but like species of the genus *Ruchias*, Sim. (Brazil), and *Scalidognathus*, Karsch (Ceylon), there is no tibial apophysis on leg i.; again, like *Hermacha*, Sim. (Central America and South Africa) the inferior tarsal claw is very rudimentary. It would seem, therefore, that a new genus is necessary for its reception. It may also be necessary hereafter to establish a new group for its convenience since it differs from all Nemesids in having the thoracic fovea straight instead of recurved. However, until such time as additional material, including male and female examples, shall have been collected, it will be better to include it in the Nemesiæ group. Accordingly it is there so placed.

Genus Bancroftiana,⁷ *gen. nov.*

Cephalothorax.—Obovate. *Pars cephalica* gently ascending; *ocular area* raised. *Pars thoracica* uneven, radial grooves distinct; *thoracic fovea* deep, straight. *Eyes*.—Eight, distributed over two rows of four each, the front row being procurved, and the rear recurved. *Legs*.—Long, tapering, not strong, spined; tarsi i. and ii. scopulated; superior claws long, armed with two rows of teeth; inferior claw rudimentary; no tibial apophysis on leg i. *Palpi*.—Tibial joint furnished with an apophysis; bulb bilobed, and terminated with a long pointed style. *Falces*.—Armed with two rows of teeth, between which there is an intermediate series. *Labium*.—Short, broader than long. *Sternum*.—Shield-shaped; *sigilla* not very distinct, anterior pairs small and marginal, the posterior rather large, submarginal. *Spinnerets*.—Superior pair stout, basal joint much the longest, and the third minute and dome-shaped; inferior spinners very small.

BANCROFTIANA SPECIOSA, *sp. nov.*

(Pl. xxii., figs. 77 and 78.)

♂. Cephalothorax, 8 mm. long, 7 mm. broad; abdomen, 8·3 mm. long, 5·5 mm. broad.

Cephalothorax.—Obovate, sides rounded, orange-red with two lateral fuscous patches on cephalic segment, surface furnished with black bristly hairs. *Pars cephalica* ascending, moderately high, segmental groove distinct: *ocular area* raised, broader than long, black, fringed in front with a tuft of stiff bristles; *clypeus* broad, sloping forward, hyaline, indented at middle. *Pars thoracica* broad, uneven, radial grooves distinct; *thoracic fovea* deep, straight; *marginal band* yellowish, broad, undulated, fringed with short stiff black bristles. *Eyes*.—Distributed over two rows

⁷ In honour of the Collector.

of four each, the front procurved and the rear recurved; anterior medians round, largest of the group, and separated from each other by a space equal to about one-half their own individual diameter; anterior laterals larger than rear lateral eyes, elliptical, poised obliquely, each separated from its inner neighbour by a space nearly equal to that of one-half the individual diameter of one of the latter eyes; rear laterals also elliptical, and poised obliquely; rear medians very small, widely removed, each just touching the ring of its outer neighbour (Pl. xxii., fig. 77). *Legs*.—Concolorous with cephalothorax, long, not strong, tapering, hairy, but displaying naked areas, armed with numerous moderately strong black spines; tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, similar in colour and clothing to legs; tibia inflated and furnished with an apophysis, upon which there are a number of small black spines; bulb reddish, shining, bilobed, and terminating in an elongated, curved, slightly twisted, pointed style, the tip of which is barbed (Pl. xxii., fig. 78). *Edces*.—Concolorous with cephalothorax, narrow, not very strong, projected well forward, clothed with fine hairs and bristles, but displaying naked areas; *rastellum* consists of two transverse rows of moderately strong teeth; inner ridge of the furrow of each falx armed with a row of six large teeth, and one small one; outer ridge armed with a row of ten small teeth; between these two rows there is an intermediate series of eight minute teeth; the teeth upon the inner ridge are rather widely separated from each other; *fang* reddish-brown, shining, long, well curved. *Maxillæ*.—Yellowish, arched, hairy, slightly excavated at base, heel well rounded. *Labium*.—Short, broader than long, submerged, arched, concolorous with maxillæ, apex rounded and fringed with rather long, black bristles; there are also a few bristles distributed over the surface. *Sternum*.—Concolorous with labium, somewhat shield-shaped, narrowest in front, and broadest near the third pair of coxæ, arched, clothed with hairs and bristles, the marginal ones being much the longest and strongest; *sigilla* not distinct; first and second pairs very small, marginal; posterior pair rather large, round and submarginal. *Abdomen*.—Ovate, arched, slightly overhanging base of cephalothorax, hairy; superior surface yellow with a broad, longitudinal median band, and seven transverse bars of dark brown; inferior surface yellow. *Spinnerets*.—Short, yellow, hairy; superior pair stout, first joint longer than second and third combined, the latter minute and dome-shaped; inferior spinners very short, cylindrical, and separated from each other by a space equal to rather more than once their own individual transverse diameter.

Hab.—Eidsvold, Queensland.

Group CATAXEÆ.

In 1914, one of the writers of this paper⁸ proposed a new group to be known as Cataxeæ, for the reception of a species which, whilst possessing three claws and a rastellum, was devoid of tarsal scopulæ. The species thus described, *Cataxia maculata*, displayed, so far as its eye formula was

⁸ Rainbow—Rec. Austr. Mus., x., 8, 1914, p. 222.

concerned, an affinity to the genus *Aganippe*, L. Koch. The species described hereunder, which are also devoid of scopula, display an eye formula more in conformity with the *Arbanitea*, consequently a new genus is imperative for their reception and so we propose the following:—

Genus Armadalia, gen. nov.

Cephalothorax.—Obovate, arched. *Pars cephalica* ascending, moderately high; *ocular area* broader than long. *Pars thoracica* broad at middle; *thoracic forea* deep, procurved. *Eyes*.—Distributed over two rows of four each, the front one being procurved, and the rear procurved in front and recurved behind; both rows close together. *Legs*.—Moderately long, strong; no scopula present; claws, three. *Falces*.—Projected, furnished with a *rastellum*; both ridges of the furrow of each falx armed with teeth. *Labium*.—Short, broad, free. *Sternum*.—Pyriform, broad, posterior *sigilla* away from margin. *Spinnerets*.—As in *Arbanitis*, L. Koch.

ARMADALIA ORNATA, sp. nov.

(Pl. xxii., fig. 79.)

♀. Cephalothorax, 9·2 mm. long, 7·6 mm. broad; abdomen, 10·5 mm. long, 7·6 mm. broad.

Cephalothorax.—Obovate, yellow, moderately hairy, and furnished with a few bristles. *Pars cephalica* moderately high, ascending, arched, slightly depressed at rear of ocular area, and slightly compressed laterally, segmental groove distinct; *ocular area* broader than long, raised, arched, black, furnished in front with a few short black bristles; *clypeus* hyaline, sloping forward, moderately deep, very gently undulated. *Pars thoracica* arched, retreating rearwards, radial grooves broad, deep; *thoracic forea* slightly procurved; *marginal band* pale, undulated, reflexed, fringed with rather long fine hairs. *Eyes*.—Distributed over two rows of four each, the front one being procurved and the rear procurved in front and recurved behind; front lateral eyes largest of the group, two-and-a-half times their individual diameter apart, elliptical, poised obliquely, and mounted upon black rings; front medians round, and separated from each other by a space equal to about one-half their own individual diameter; rear laterals smaller than their anterior lateral neighbours, elliptical, poised obliquely, ringed with black; posterior intermediate eyes minute, round, widely separated, each just touching the outer ring of its lateral neighbour; both rows close together (Pl. xxii., fig. 79). *Legs*.—Short, sturdy, concolorous with cephalothorax, hairy, but displaying naked areas; legs i. and ii. armed with long, strong black spines, and legs iii. and iv. with long weak spines; scopula absent from all legs; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour and clothing to legs, and armed with long, powerful black spines; tarsal scopula absent. *Falces*.—Orange-red, projected, clothed with fine black hairs and long coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with six strong teeth, and the outer with ten smaller ones; between these two rows there is an intermediate series of four minute teeth; *rastellum* consists of a series of teeth spread over a

somewhat extensive area; *fang* long, dark brown, shining, well curved. *Maxille*.—Yellow, hairy, arched, heel well rounded; at lower portion of inner angle there is a cluster of small spines; apex of inner angle acuminate. *Labium*.—Concolorous, longer than broad, slightly widest at base, free, moderately clothed with rather coarse bristles. *Sternum*.—Pyriform, broad, arched, yellow, clothed with short, black hairs, and laterally with long coarse bristles, and terminating obliquely between fourth pair of coxæ; posterior *sigilla* away from margin, and seated at a point in a line midway between coxæ ii. and iii. *Abdomen*.—Obovate, arched, moderately projecting over base of cephalothorax, clothed with fine yellowish hairs; superior surface yellow, marked longitudinally and laterally with broad, chocolate brown bars; the longitudinal bar terminates midway, and the six transverse bars are recurved; between the bars there are a number of small brown spots; sides yellow; inferior surface concolorous, hairy. *Spinnerets*.—Yellow, hairy; superior pair extending slightly beyond tip of abdomen, their first joint longest, and their third minute and dome-shaped; inferior spinners small, coniform, and separated from each other by a space equal to once their own individual diameter.

Hab.—Eidsvold, Queensland.

ARMADALIA SETOSA, *sp. nov.*

(Pl. xv., fig. 16, and Pl. xxii., fig. 80.)

♀. Cephalothorax, 5.5 mm. long, 4.5 mm. broad; abdomen, 7.1 mm. long, 5.5 mm. broad (Pl. xv., fig. 16).

Cephalothorax.—Obovate, yellow, moderately clothed with fine yellowish hairs. *Pars cephalica* moderately high, ascending, arched, segmental groove distinct; *ocular area* broader than long, black, raised, arched, fringed in front with a small tuft of bristles; *clypeus* hyaline, sloping forward, indented at middle. *Pars thoracica* broad, retreating rearwards, radial grooves rather deep; *thoracic fovea* deep, slightly procurved; *marginal band* pallid, undulated, fringed with short, fine, pale hairs. *Eyes*.—Distributed over two rows of four each, the front one being procurved and the rear recurved behind and procurved in front; front lateral eyes about three times their individual diameter apart; intermediate pair as large as their lateral neighbours, and separated from each other by about one half their own individual diameter; rear lateral eyes slightly smaller than their anterior neighbours, elliptical, poised obliquely, and ringed with black; rear medians smallest of the group, widely separated, each one touching its lateral neighbour; both rows close together (Pl. xxii., fig. 80). *Legs*.—Short, sturdy, concolorous with cephalothorax, clothed with short black hairs, and erect setæ, but displaying naked areas; setæ most numerous on legs iii. and iv.; legs i. and ii. armed with short, powerful spines, and legs iii. and iv. with weak ones; metatarsi iii. armed on upper surface with three short, strong spines; relative lengths: 4, 1, 2, 3. *Palpi*.—Similar in colour and clothing to legs, and armed with numerous short, powerful spines. *Falces*.—Projected, concolorous with cephalothorax, clothed with fine black hairs and coarse black

bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with six and the outer with eight strong teeth; *rastellum* consists of three rows of fairly strong teeth. *Maxilla*.—Yellow, hairy, heel well rounded, and furnished with a cluster of small spines at base of inner angle. *Labium*.—Concolorous, free, submerged, broader than long, slightly widest at base, arched, clothed with a few bristly hairs. *Sternum*.—Broad, pyriform, arched, pale yellow, moderately clothed with fine hairs and laterally with long, strong bristles, and terminating obtusely between fourth pair of coxae. *Abdomen*.—Obovate, arched, moderately hairy, slightly overhanging base of cephalothorax; superior surface dull, dark green, ornamented with a broad chocolate-brown longitudinal band and transverse bars; between the latter there are a number of small brown spots; longitudinal band terminates about midway; sides and inferior surface dull green, and hairy. *Spinnerets*.—Yellow, hairy; superior pair extended slightly beyond tip of abdomen, the first joint longest and the third shortest and dome-shaped; inferior spinners minute, and separated from each other by a space equal to once their individual transverse diameter.

Obs.—Very similar to foregoing in abdominal ornamentation, but easily distinguished therefrom by its smaller size, setose legs, and dentition of falces.

Hub.—Armadale, West Australia (March 26, 1912).

ARMADALIA ZORODES,⁹ *sp. nov.*

(Pl. xxii., fig. 81.)

♀. Cephalothorax, 6·7 mm. long, 5·3 mm. broad; abdomen, 10 mm. long, 7·4 mm. broad.

Cephalothorax.—Obovate, yellow-brown, shining, moderately hairy, arched. *Pars cephalica* ascending, sides compressed, declivous, furnished with a tuft of bristles in front of eyes, and a row of same running from rear of eyes to posterior extremity, segmental groove distinct; *ocular area* broader than long, raised, dark brown; *clypeus* broad, sloping forward, undulating, hyaline. *Pars thoracica* uneven, retreating, radial grooves broad; *thoracic fovea* deep, procurved; *marginal band* undulating, hyaline, fringed with fine hairs. *Eyes*.—Compactly grouped, distributed over two rows of four each; front row procurved, the rear recurved behind and procurved in front; front side eyes somewhat the largest of the group, elliptical and poised obliquely; anterior medians round, separated from each other by a space equal to about one-half their own individual diameter, and each again from its lateral neighbour by a similar space; rear laterals elliptical, and poised obliquely; posterior medians widely separated, small, each just touching its lateral neighbour; both rows of eyes close together (Pl. xxii., fig. 81). *Legs*.—Concolorous with cephalothorax, strong, hairy, but displaying naked areas; tibia, metatarsus and tarsus i. and ii. armed with strong short spines; those on legs iii. and iv. less

⁹ ξωρωδης=unmarked.

numerous and not so strong; relative lengths: 4, 1, 2, 3. *Palpi*.—Concolorous with legs, strong, moderately long, similar to legs i. and ii. in armature and clothing. *Falces*.—Concolorous with cephalothorax, shining, arched, moderately projected, clothed with fine hairs and coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with six strong teeth, and the outer with a row of eight small teeth, the latter placed closely together; *jaw* dark brown, shining, long, well curved. *Maxillæ*.—Yellow, hairy, heel well rounded; near excavated angle there is a cluster of small dark spines; beard yellowish. *Labium*.—Concolorous, short, free, slightly longer than broad, arched, furnished with a few short stiff bristles, apex rounded. *Sternum*.—Concolorous also, shield-shaped, slightly arched, widest near third pair of coxæ, thinly clothed with stiff black bristles; posterior *sigilla* large, and away from margin. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, clay yellow, clothed with fine hairs and long black bristles or setæ. *Spinnerets*.—Concolorous, hairy; superior pair short, stout, tapering, first joint longest, the third shortest; inferior spinners cylindrical, fully twice their own individual transverse diameter apart.

Hab.—Mount Lofty, South Australia.

ARMADALIA PALLIDA, *sp. nov.*

(Pl. xxiii., fig. 82.)

♀. Cephalothorax, 10.5 mm. long, 7.6 mm. broad; abdomen, 14.1 mm. long, 9.4 mm. broad.

Cephalothorax.—Obovate, yellow, arched, moderately clothed with fine yellow, downy hairs. *Pars cephalica* high, ascending, sides compressed, marginal groove distinct, a row of stiff bristles or setæ runs down the middle from rear of eye space to base of cephalic segment, there is also a tuft of stiff bristles in front of the eyes; *ocular area* broader than long, slightly raised, front median eyes surrounded by black, there are also two small black lateral bands, each of which lies between and connects the rings upon which the side eyes are poised; *clypeus* deep, sloping, indented at middle, hyaline. *Pars thoracica* uneven, retreating, radial grooves deep; *thoracic fovea* deep, moderately procurved. *Eyes*.—Distributed over two rows of four each, the front row being procurved, and the rear recurved: front lateral eyes just touching edge of clypeus, largest of the group, elliptical, poised obliquely, and separated from each other by a space equal to that of two-and-a-half times their own individual diameter; anterior medians round, and separated from each other by one-half that of their own individual diameter; rear side eyes elliptical, obliquely poised, smaller than their front lateral neighbours, from which they are separated by a space equal to that of once their own individual diameter; rear intermediates minute, each just touching the outer edge of the ring of its lateral neighbour (Pl. xxiii., fig. 82). *Legs*.—Concolorous with cephalothorax, strong, moderately long, hairy, but displaying naked areas: each tibia, metatarsus and tarsus armed with powerful spines; relative lengths: 4, 1, 2, 3. *Palpi*.—Rather long, strong, similar in colour, clothing and armature to legs. *Falces*.—Slightly darker than cephalothorax, projected well forward, clothed with fine hairs and coarse bristles,

but displaying naked areas; inner ridge of the furrow of each falx armed with six strong teeth, and the outer with eight small ones; in addition to these there is an intermediate row of nine minute ones, the row terminating near base of fang; *rastellum* consists of three transverse rows of strong teeth; *fang* reddish brown, strong, well curved. *Maxilla*.—Yellow, arched, hairy, excavated at base, heel obtuse, inner angle bearded with long yellow hairs and terminating apically in an obtuse point; a few small spines near the base. *Labium*.—Concolorous, free, slightly submerged, short, broad, well arched, apex fringed with long black bristles; a few of the latter are also spread over the surface. *Sternum*.—Concolorous also, shield-shaped, arched, clothed with long black bristles; first and second pairs of *sigilla* marginal, posterior pair large, submarginal. *Abdomen*.—Ovate, arched, very slightly projecting over base of cephalothorax, yellow, clothed with fine yellowish down, and, on its superior surface, with rather long setae. [The latter had become detached from the animal when placed in the tube in which it was preserved.] *Spinnerets*.—Short, yellow, hairy; superior pair stout, first joint longest, the third minute and dome-shaped; inferior spinners very short, and twice their own diameter apart; *colulus* well developed.

Obs.—Collector's [R.H.P.] fieldnote reads: "Hard-lid trapdoor."

Hab.—Eidsvold, Queensland.

Genus Cataxia, Rainbow.

The following species belongs to the above genus¹⁰ which it seems advisable to amend in so far as the *labium* and *sternum* are concerned, so as to read as follows:—

Labium.—Short, broad, arched, bespined at apex. *Sternum*.—Shield-shaped, arched, first and second pairs of *sigilla*, when present, very small, marginal; posterior *sigilla* submarginal, large.

CATAXIA TETRICA, *sp. nov.*

(Pl. xxiii., fig. 83.)

♀. Cephalothorax 10.9 mm. long, 7.1 mm. broad; abdomen 11.7 mm. long, 12.5 mm. broad.

Cephalothorax.—Obovate, yellow, arched, sparingly pubescent. *Pars cephalica* ascending, sides compressed, segmental groove distinct; *ocular area* broader than long, furnished in front with a tuft of stiff bristles; *clypeus* broad, hyaline, sloping forward, deeply indented at middle. *Pars thoracica* uneven, retreating, radial grooves broad and distinct; *thoracic forea* deep, straight; *marginal band* broad, undulating, fringed with fine black hairs. *Eyes*.—Distributed over two rows of four each, the front one being strongly procurved, and the rear equally strongly recurved: front lateral eyes elliptical, obliquely poised, fully three times their own individual diameter apart; front median eyes round, and once their own individual diameter apart; rear lateral eyes largest of the group, elliptical

¹⁰ Rainbow.—Rec. Austr. Mus., x., 8, 1914, p. 223.

and poised obliquely; rear medians small, widely separated, each just touching the ring of its lateral neighbour (Pl. xxiii., fig. 83). *Legs*.—Moderately long, strong, concolorous with cephalothorax, hairy, but displaying naked areas, each well armed with black spines, of which those on legs i. and ii. are not only the most powerful but the most numerous; claws long and similar to those of *C. maculata*,¹¹ Rainbow; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour, clothing and armature to legs i. and ii. *Falces*.—Concolorous with cephalothorax, strong, projecting, clothed with fine hairs and long, coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with a row of seven strong teeth, and the outer with a row of nine small ones; between these there is an intermediate row of six minute teeth; *rastellum* consists of two rows of strong spines; *fang* long, shining, almost black, well curved. *Maxillæ*.—Yellow-brown, shining, powerful, arched, hairy, base excavated, heel well rounded and furnished with a few small spines at inner angle. *Labium*.—Rather longer than broad, but short, free, well arched, moderately hairy, three rows of small spines near apex, the latter fringed with stiff bristles. *Sternum*.—Shield-shaped, yellow, well arched, clothed with stiff bristly hairs, widest between third pair of coxæ; posterior *sigilla* large, submarginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, clothed with short hairs, yellow brown with a number of small yellow spots scattered over superior surface. *Spinnerets*.—Yellow, hairy, stout; superior pair have the basal joint longest, and the third shortest and dome-shaped; inferior pair very short, and twice their own individual transverse diameter apart.

Hab.—Eidsvold, Queensland.

Subfamily BARYCHELINÆ.

Group DIPLOTHELEÆ.

With this paper the student is introduced to a new group for Australia—the Diplotheleæ, of which, up to the present, three genera only have been known, namely *Acropholius*, Simon, *Cestrotrema*, Simon, and *Diplothele*, O. P. Cambr. Of these the two first named hail from Madagascar, and the other from India and Ceylon. The eye formula of all three genera, and the one we now know to occur in Australia show close affinity. The points upon which the group is distinguished are:—Spinnerets, usually two only; labium broader than long. Specimens known to the writers come from Henley (Adelaide), Black Hill (Mount Lofty Ranges), and Mallala, South Australia, and from Eidsvold, Queensland.

An interesting feature in connection with our Australian form, for which the name *Lampropodus scintillans* is proposed, is that the heavy tarsal brushes on all the feet of both sexes are brilliantly iridescent, especially when viewed by the aid of a strong light, bright green, fiery red and opalescent tints predominating. If the same feature obtains in exotic species, the fact has not been recorded. Another example was sent

¹¹ Rainbow.—*Loc. cit.*, p. 224, fig. 34.

by Dr. T. Bancroft from Kidsvold, Queensland. It is a distinct species from those collected around Adelaide and although the feet scintillate in a like manner with the South Australian form, they are not so heavily padded.

The foreign genera enumerated above embrace five distinct species, our Australian representatives make seven.

Genus Lampropodus,¹² *gen. nov.*

♂. *Cephalothorax*.—Obovate, narrow and truncated in front, broad at the middle. *Pars cephalica* slightly raised, arched, gently ascending, segmental groove distinct; *ocular tubercle* high, arched, rather longer than broad; *clypeus* narrow, steep. *Pars thoracica* broad, radial grooves distinct; *thoracic fovea* very slightly procurved. *Eyes*.—Distributed over three rows of 2, 2, 4 each; the rear row procurved in front, straight behind. *Legs*.—Long; tibia i. furnished with an apophysis; metatarsi and tarsi scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Tibial joint scopulated. *Falces*.—Short, not strong, moderately projected; inner ridge only of the furrow of each falx dentated. *Labium*.—Much broader than long, free; apex very slightly excavated. *Sternum*.—Pyriform, broad; *sigilla* minute, marginal. *Spinnerets*.—Stout, short, first and second joints of equal lengths; inferior spinners atrophied or absent; *anal tubercle* large.

♀. Allowing for sexual differences, similar to the male; the legs and anal tubercle are decidedly shorter, and the palpi much longer; two spinners only.

LAMPROPODUS SCINTILLANS, *sp. nov.*

(Pl. xvii., figs. 17, 18, 19 and 20, Pl. xviii., figs. 21 and 22, and Pl. xxiii., figs. 84 and 85.)

♂. *Cephalothorax*, 9·2 mm. long, 8·9 mm. broad; abdomen, 8·7 mm. long, 7·4 mm. broad (Pl. xvii., figs. 17 and 18).

Cephalothorax.—Obovate, narrowest in front, dark brown, densely matted with long, hoary silken hairs. *Pars cephalica* arched, gently ascending, segmental groove distinct; *ocular tubercle* longer than broad, high, arched, black; *clypeus* narrow, steep. *Pars thoracica* broad, arched, radial grooves moderately deep; *thoracic fovea* very slightly procurved; *marginal band* broad. *Eyes*.—Distributed over three rows of 2, 2, 4; anterior pair slightly elliptical, poised obliquely, and separated from each other by a space scarcely equal to that of once their individual diameter; second, or intermediate pair, larger than the foregoing, round, and separated from each other by a space equal to that of once their own individual diameter; posterior laterals scarcely as large as the anterior eyes, elliptical, poised obliquely, and slightly excavated on their inner angle; rear intermediates smallest of the group, elliptical, widely

¹² λαμπος, shining; ποδος, foot; =shining foot.

separated, each touching its lateral neighbour; the rear row of eyes quite close to the second or intermediate pair, procurved in front, straight behind (Pl. xxiii., fig. 84). *Legs*.—Concolorous with cephalothorax, long, densely hairy, and armed on all joints with long, fine spines; metatarsi and tarsi scopulated; tibia i. furnished with an apophysis; scopolæ and tarsal pads scintillating, the pads divided; relative lengths: 4, 1, 2, 3. *Palpi*.—Short, similar in colour and clothing to legs; tarsal joint short, scopulated; bulb, orange-red, shining, bilobed, pyriform; stigma short, twisted and terminating in a very short style (Pl. xxiii., fig. 85). *Falces*.—Short, not strong, slightly projected, densely hairy, and displaying no naked areas; inner ridge of the furrow of each falx armed with a row of six strong teeth. *Maxilla*.—Red, shining, hairy, heel well rounded, inner angle thickly beaded with red hairs, and terminating obtusely at apex. *Labium*.—Concolorous, broader than long, free, moderately hairy, arched, apex gently excavated and fringed with coarse bristles. *Sternum*.—Slightly darker than foregoing, broad, somewhat pyriform, flat, hairy; *sigilla* minute, marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, dark brown, densely clothed with long hairs; *anal tubercle* large, extending nearly to apices of spinners. *Spinnerets*.—Concolorous, short, stout, first and second joints of equal lengths, the third minute, dome-shaped.

♀. Cephalothorax, 9.5 mm. long, 8.5 mm. broad; abdomen, 12.6 mm. long, 9.2 mm. broad (Pl. xvii., figs. 19 and 20).

Cephalothorax.—Obovate, dark brown, thickly clothed with moderately long silky yellowish hairs; the latter are not nearly as long or so thickly matted as in the male. *Pars cephalica* gently ascending, truncated in front, segmental groove distinct; *ocular tubercle* high, well arched, black, furnished in front with a small tuft of short, black bristles; *clypeus* as in the male. *Pars thoracica* broad, radial grooves distinct; *thoracic furca* very slightly procurved; marginal band fringed with rather long hairs. *Eyes*.—Similar to those of the male. *Legs*.—Moderately long, concolorous with cephalothorax, thickly clothed with grey hairs, amongst which are a number of long, black bristles; each ambulatory limb armed with long, fine black spines; metatarsi and tarsi thickly scopulated; scopolæ and tarsal pads iridescent; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, similar in colour, clothing and armature to legs. *Falces*.—Concolorous with cephalothorax, similar in clothing and armature to male. *Maxilla*.—Dark brown, shining, heel rounded, inner angle fringed with a beard of long, bright red hairs. *Labium*.—Concolorous; similar to male. *Sternum*.—Concolorous also, broad, flat, moderately hairy, terminating obtusely between fourth pair of coxæ; *sigilla* minute, marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, dark brown, thickly clothed with fine short hairs; two muscle spots just visible near anterior extremity; *anal tubercle* well developed, but shorter than in the male. *Spinnerets*.—Two only, concolorous, short, stout, hairy; first and second joints of equal lengths, the third minute.

Hab.—Henley Beach, Adelaide; Black Hill, Mount Lofty Ranges (November 18th, 1917); and Mallala, South Australia.

LAMPROPODUS IRIDESCENS, sp. nov.

(Pl. xix., figs. 23 and 24, and Pl. xxiii., figs. 86 and 87.)

♂. Cephalothorax, 9.6 mm. long, 8.7 mm. broad; abdomen, 9.4 mm. long, 7.1 mm. broad (Pl. xxiii., figs. 23 and 24).

Cephalothorax.—Obovate, narrowest in front, dark brown, moderately clothed with long dark hairs. *Pars cephalica* arched, gently ascending, segmental groove distinct; *ocular area* raised, arched, longer than broad; *clypeus* narrow, steep, hyaline. *Pars thoracica* broad, arched, radial grooves distinct; *thoracic furrow* very slightly procurved; *marginal band* broad. *Eyes*.—Distributed over three rows of 2, 2, 4 each; anterior pair touching edge of clypeus, large, separated from each other by a space equal to once their individual diameter; intermediate pair of equal size to foregoing, and separated from each other by a space equal to rather more than one-half their individual diameter; posterior laterals elliptical, poised obliquely, and distinctly smaller than their anterior neighbours; rear medians smallest of the group, widely separated from each other, elliptical, each touching its lateral neighbour; the rear row of eyes is quite close to the second or intermediate pair, procurved in front and straight behind (Pl. xxiii., fig. 86). *Legs*.—Long, hairy, dark brown, tapering, and armed with rather short fine spines; first and second pairs stout; tibia i. furnished with a prominent apophysis, at the apex of which there is a stout, stiff spine; metatarsi and tarsi scopulated; scopulae when viewed by the aid of a bright light display iridescent reflections; tarsal pads not divided; relative lengths: 4, 1.2, 3. *Palpi*.—Short, similar in colour and clothing to legs, tarsal joint scopulated; bulb pyriform, shining, reddish, twisted at penultimate extremity, and terminating in a short style (Pl. xxiii., fig. 87). *Falces*.—Short, concolorous with cephalothorax, slightly projected, not strong, densely hairy, and displaying no naked areas; inner angle of the furrow of each falx armed with a row of eight strong teeth; beard long, red. *Mandibles*.—Brown, hairy, heel well rounded, inner angle bearded with long red hairs, and terminating obtusely at apical extremity. *Labium*.—Concolorous, short, broader than long, free, arched, apex very slightly excavated, and fringed with coarse bristles. *Sternum*.—Chocolate brown, somewhat pyriform, flat, hairy, and terminating in an acute point between fourth pair of coxae; *sigilla* minute, marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, hairy, dark brown. *Spinnerets*.—Superior pair yellowish, short, stout, hairy, first joint longest, the third minute and dome-shaped; inferior pair close together, exceedingly minute, and hidden amidst the dense hairy clothing.

Obs.—One specimen only and that collected by Dr. T. Bancroft. *L. iridescens* is easily distinguished from *L. scintillans* by the clothing of the cephalothorax, the palpal bulb, and the dental armature of the falces. In *scintillans* the cephalothorax is strikingly hoary, the bulb bilobed, and the inner margin of the furrow of each falx armed with six strong teeth, whilst in *iridescens* the cephalothorax is dark brown and very much less densely clothed; the bulb is not bilobed, and the inner margin of the furrow of each falx is armed with eight strong teeth.

Hab.—Edsvold, Queensland.

Group BARYCHELEÆ.

Genus Encyocrypta, Sim.

ENCYOCRYPTA FUSCA, L. Koch.

Idionnata fusca, L. Koch, Die Arach. des Austr., i., 1873, p. 478, pl. xxxvii., figs. 1, 1a, 1b.

Encyocrypta fusca, Hogg, Proc. Zool. Soc., 1901, p. 241; Rainbow, Rec. Austr. Mus., x., 8, 1914, p. 226, figs. 36-39.

Obs.—An immature example; collected by Dr. T. Bancroft.

Hab.—Eidsvold, Queensland.

Genus Idioctis, L. Koch.

IDIOCTIS PALMARUM, Hogg.

Idioctis palmarum, Hogg, Proc. Zool. Soc., 1901, p. 242, figs. 26a and c.

Hab.—Palm Creek, Central Australia.

Subfamily AVICULARINÆ.

Group SELENOCOSMIEÆ.

Genus Selenocosmia, Auss.

SELENOCOSMIA STIRLINGI, Hogg.

Selenocosmia stirlingi, Hogg, Proc. Zool. Soc., 1901, p. 245, fig. 27.

Obs.—The specimens from Mallala are immature; those from Pichi Richi are fully grown.

Hab.—Mallala, and Pichi Richi, South Australia.

SELENOCOSMIA CRASSIPES, L. Koch.

Phrietus crassipes, L. Koch, Die Arach. des Austr., i., 1874, p. 490, pl. xxxvii., figs. 5, 5a.

Phlogius crassipes, Sim., Bull. Soc. Ent. France (6), vii., 1887; Hist. Nat. des Araign., i., 1892, p. 146.

Phrietus crassipes, Spencer, Rep. Horn. Expl. Exped., ii., Zoology, 1896, p. 412, pl. 28; Rainbow, Rec. Austr. Mus., iv., 1, 1901, p. 11.

Selenocosmia crassipes, Hogg, Proc. Zool. Soc., 1901, p. 245.

Hab.—Mallala, South Australia.

Genus Selenotypus, Pocock.

SELENOTYPES PLUMIPES, Pocock.

Selenotypus plumipes, Pocock, Ann. Mag. Nat. Hist. (6), 1895, p. 176, pl. x., figs. 2, 2a, 2b; Hogg, Proc. Zool. Soc., 1901, p. 249, fig. 29.

Obs.—This is our largest Australian spider. The specimen before the writers was collected by Dr. McGillivray.

Hab.—Claudie River, Cape York, North Queensland.

Subfamily DIPLURINÆ.

Group DIPLUREÆ.

Genus *Aname*, L. Koch.

This genus was sunk by Simon¹³ as a synonym of *Brachythele*, Auss., but was afterward rehabilitated by Hogg.¹⁴ Later, Simon, in the supplement to his great work,¹⁵ accepted the decision of Hogg, and concurred in the re-establishment of L. Koch's genus. The confusion of *Aname* and *Brachythele* was due to the incomplete definition of the former by its author. Up to the present time seven species have been recorded to the genus, and to these sixteen additional forms are now made known. Of the seven previously recorded, however, one, *A. bicolor*,¹⁶ Rainbow, must be transferred to the genus *Atrax*, O. P. Cambr., to which, by its scheme of dentition it certainly belongs. In *Aname* one ridge only of the furrow of each falk is provided with teeth, whereas in what must now be known as *Atrax bicolor*, both ridges are dentated.

Two males are included in the species described hereunder, and neither of them are provided with an apophysis. The absence of this is, of course, a generic character. For the guidance of students the following table is appended. In respect of Hogg's species, neither of which are included in our collection, the features noted have been adopted from that author's original description.

Front median eyes one half their own individual diameter apart; abdomen yellow with black median and lateral stripes.....	<i>A. pallida</i> , L. Koch.
Front median eyes three quarters their own individual diameter apart; front and rear side eyes equal in size and almost contiguous; abdomen black above and mottled with irregular yellow spots.....	<i>A. grisea</i> , Hogg.
Front median eyes one-and-a-half their individual diameter apart; superior surface of abdomen black with a longitudinal bar and lateral stripes, the latter forming an inverted eschelon pattern; bar and stripes composed of irregular yellow spots.....	<i>A. arborea</i> , Hogg.
Front median eyes twice their own individual diameter apart; superior surface of abdomen black with five yellow lateral stripes.....	<i>A. pellucida</i> , Hogg.
Front median eyes three-quarters their own individual diameter apart; abdomen dingy yellow, with short, fine, downlying, yellow hair interspersed on upper side with long, thin, upstanding bristles....	<i>A. tasmanica</i> , Hogg.
Front median eyes one-half their own individual diameter apart, heel of each maxilla well rounded, devoid of spines; abdomen dark brown, densely clothed with long hairs.....	<i>A. minor</i> , Kulez.

¹³ Simon.—Hist. Nat. des Araign., i., 1902, p. 180.

¹⁴ Hogg.—Proc. Zool. Soc., 1901, p. 251.

¹⁵ Simon.—*Op. cit.*, ii., 1897 (1903), p. 965.

¹⁶ Rainbow.—Rec. Austr. Mus., x., 8, 1914, p. 233.

- Eyes of front row very close to each other, and also to edge of clypeus; heel of each maxilla thickly studded with spines; abdomen chocolate-brown, densely clothed with long hairs.....*A. villosa*, sp. nov.
- Front median eyes rather more than one half their own individual diameter apart; heel of each maxilla densely studded with spines; abdomen chocolate-brown, clothed with grey silky hairs.....*A. hirsuta*, sp. nov.
- Front median eyes rather smaller than their lateral neighbours, and separated from each other by a space equal to that of one-half their own individual diameter; heel of each maxilla thickly studded with spines; abdomen dark brown, densely hairy.....*A. comosa*, sp. nov.
- Front median eyes once their own individual diameter apart; heel of each maxilla thickly studded with spines; abdomen yellow-brown with a dark brown median area extending, on its superior surface, from anterior extremity towards spinnerets.....*A. grandis*, sp. nov.
- Front median eyes half their own individual diameter apart; heel of each maxilla thickly studded with spines; the entire body yellow.....*A. aurca*, sp. nov.
- Front median eyes half their own individual diameter apart; heel of each maxilla thickly studded with spines; superior surface and sides of abdomen brown, spotted with yellow, densely clothed with yellowish pile and furnished at anterior extremity with a number of short black bristles.....*A. flavomaculata*, sp. nov.
- Space in both sexes between each eye of front row less than one-half the individual diameter of one of the anterior median eyes; bulb of σ palpus yellow, pyriform, twisted and terminating in a short blunt style; a small cluster of spines near heel of each maxilla (σ); two or three small spines near apex of labium; abdomen densely clothed with long hairs; yellow with undefined smoky areas. φ : Maxilla and labium as in σ ; abdomen yellow mottled with chocolate brown, the latter forming a moderately well defined median design with lateral markings.....*A. nebulosa*, sp. nov.
- Front median eyes once their own individual diameter apart; a cluster of small spines at excavated angle of each maxilla; three small spines on labium; superior surface of abdomen yellow with brown spots and median and lateral markings, the latter broken and forming a rather ill-defined pattern.....*A. decora*, sp. nov.
- Front median eyes one-half their own individual diameter apart; inner angle of each falx armed with moderately long black spines similar to those on legs; base of maxillæ studded with spines; three small spines on labium; superior surface of abdomen yellow, mottled with dark brown, but displaying no design.....*A. armigera*, sp. nov.
- Front median eyes three-quarters their own individual diameter apart; each maxilla densely bespined at base; superior surface of abdomen dark brown mottled with pale yellow spots.....*A. maculata*, sp. nov.
- Front median eyes one-half their own individual diameter apart; cephalothorax yellow-brown, margined with dark brown; heel of each maxilla thickly studded with small spines; abdomen densely clothed with long hairs, the superior surface dark brown, and the sides yellow-brown.....*A. fuscocincta*, sp. nov.
- Front median eyes about one-half their own individual diameter apart; heel of each maxilla furnished with a few small spines; superior surface and sides of abdomen dark brown, mottled with dull yellow spots.....*A. canosa*, sp. nov.
- Front median eyes one-third their own individual diameter apart; bulb of σ palpus dark brown, pyriform, bilobed, and terminating in a moderately long, pointed style; abdomen densely clothed with long hairs; superior surface dark brown with an interrupted median longitudinal yellow band, and transverse concolorous bars.....*A. pulchra*, sp. nov.

Front median eyes three-quarters their own individual diameter apart; heel of each maxilla studded with a dense cluster of small spines; abdomen dark brown, densely clothed with long hairs.....*A. robusta*, sp. nov.

Front median eyes once their own individual diameter apart; each maxilla furnished with a few small spines at base of inner angle; two or three small spines present on labium; superior surface of abdomen in typical form yellow, mottled with brown spots and patches, both of which form a confused design; in *var. a* the abdomen is densely clothed with long hairs, and the superior surface is dark brown with one large yellow spot near anterior extremity; in addition to this there is a number of small and obscure yellow spots.....*A. confusa*, sp. nov.

Eyes of front row close together, the laterals being slightly the largest of the group; anterior and posterior side eyes touching; maxillæ studded with spines; superior surface of abdomen dark brown, intricately mottled with yellow.....*A. intricata*, sp. nov.

Eyes of front row separated from each other by a space equal to that of one-half the individual diameter of one of the median pair; anterior and posterior side eyes touching; each maxilla furnished at base with a cluster of small spines, and the labium near apex with three or four; superior surface of abdomen dark brown, spotted with yellow.....*A. butleri*, sp. nov.

ANAME MINOR, Kulez.

Aname minor, Kulez., Ann. Mus. Nat. Hung., vi., 1908, p. 456.

Hab.—Mount Victoria, New South Wales.

ANAME ? PALLIDA, L. Koch.

Aname pallida, L. Koch, Die Arach. des Austr., i., 1873, p. 465, pl. xxxv., figs. 8 and 8a; Hogg, Proc. Zool. Soc., 1901, p. 252; Rainbow, Rec. Austr. Mus., x., 8, 1914, p. 222.

Obs.—Several female examples in different stages of development, of what is probably L. Koch's species. Hogg (*supra*), in a note upon *A. pallida* says:—"The dark median and side stripes on abdomen, and front middle eyes only one-half a diameter apart serve to distinguish it." The points here quoted are borne out in the examples before us.

Hab.—Eidsvold, Queensland.

ANAME VILLOSA, sp. nov.

(Pl. xxiii., fig. 88.)

♀. Cephalothorax, 10·7 mm. long, 8·7 mm. broad; abdomen, 12·5 mm. long, 8·7 mm. broad.

Cephalothorax.—Obovate, arched, chocolate brown, hairy. *Pars cephalica* ascending, truncated in front, segmental groove distinct; *ocular area* broader than long, raised; *clypeus* very narrow, dull grey. *Pars thoracica* retreating gently posteriorly, radial grooves distinct; *thoracic foræ* procurved; *marginal band* narrow, grey, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each; the front row procurved and the rear recurved; front lateral eyes large, elliptical, and poised obliquely; anterior intermediate pair round; the eyes of this row are very close to

each other, and also to the edge of the clypeus; lateral eyes of second row large, elliptical, poised obliquely, each just touching the apex of its anterior lateral neighbour; intermediate eyes of rear row small, widely separated, each touching its lateral neighbour (Pl. xxiii., fig. 88). *Legs*.—Moderately long, tapering, yellowish brown, clothed with long, fine black hairs, but displaying naked areas; each armed with long, fine black spines; metatarsi i. and ii. partially scopulated; tarsi i. and ii. fully so; relative lengths: 4, 1, 2, 3. *Palpi*.—Short, not strong, similar in colour and clothing to legs; tarsi scopulated. *Falces*.—Projected well forward, strong, concolorous with cephalothorax; clothed with long coarse hairs or bristles, but displaying naked areas; inner margin of the furrow of each falx armed with a row of ten strong teeth; in addition to these there is at base an intermediate row of six minute teeth; *fang* long, black, shining, well curved. *Maxillæ*.—Yellowish, hairy, arched, heel well rounded, and thickly beset with small spines. *Labium*.—Concolorous submerged, free, short, broader than long, arched, sides rounded, apex slightly excavated and fringed with a row of strong bristles. *Sternum*.—Broad, somewhat pyriform, arched, concolorous with foregoing, hairy; *sigilla* marginal. *Abdomen*.—Obovate, arched, moderately overhanging base of cephalothorax, chocolate brown, densely clothed with long hairs. *Spinnerets*.—Yellow, hairy; superior pair long, tapering; the third joint of these is the longest, and the first and second are of equal length; inferior spinnerets short, and once their individual diameter apart.

Obs.—The example from Tambourine Mountain was dry. In the tube there is a label upon which had been pencilled, as a field note: "Open burrow."

Hab.—Eidsvold and Tambourine Mountain, Queensland.

ANAME HIRUTA, *sp. nov.*

(Pl. xxiii., figs. 89 and 90.)

♀. Cephalothorax, 10.5 mm. long, 9 mm. broad; abdomen, 14.2 mm. long, 9.8 mm. broad.

Cephalothorax.—Yellow brown, hairy, obovate, arched. *Pars cephalica* ascending, truncated in front, segmental groove distinct; *ocular area* broader than long, raised, fringed in front with bristles; *clypeus* narrow, indented at the middle, grey. *Pars thoracica* broad, radial grooves distinct; *thoracic forca* procurved; *marginal band* narrow, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each, the front being slightly procurved and the rear recurved; lateral eyes of both rows of equal size, elliptical, poised obliquely, not touching; anterior medians round; rear medians elliptical, and smallest of the group (Pl. xxiii., fig. 89). *Legs*.—Moderately long, strong, concolorous with cephalothorax, hairy, but displaying naked areas, and armed with long, strong spines; metatarsi i. and ii. partially scopulated, the tarsi fully so; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, strong, concolorous with legs, and similar to them in clothing and armature; tarsi scopulated. *Falces*.—Projected well forward, strong, dark brown, arched, densely clothed with coarse hairs or bristles; inner ridge of the furrow of each falx armed with a row of twelve teeth; of these the five at the base are

very small; in addition to the row thus described there is an intermediate series of four minute teeth at the base of each falx; *fang* long, shining, dark brown, well curved. *Maxillæ*.—Yellow, arched, hairy, heel well rounded and thickly studded with a cluster of small spines. *Labium*.—Concolorous, submerged, arched, hairy, short, broader than long, apex excavated and fringed with bristles. *Sternum*.—Somewhat shield-shaped, concolorous also, arched, clothed with long, coarse black hairs; *sigilla* marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, chocolate brown, clothed with grey, silky hairs. *Spinnerets*.—Superior pair long, yellow, tapering, hairy, first joint longest and the second shortest; inferior spinnerets yellow-brown, cylindrical, hairy, and separated from each other by a space equal to once their individual transverse diameter.

Obs.—A second example, also from Mallala, is interesting from the fact that two eyes on one side are missing. The abnormality is not due to accident as the cephalothorax is uninjured (Pl. xxiii., fig. 90).

Hab.—Mallala, South Australia (April and May, 1908).

ANAME COMOSA, *sp. nov.*

(Pl. xxiii., fig. 91.)

♀. Cephalothorax, 9·8 mm. long, 7·5 mm. broad; abdomen, 10·1 mm. long, 7·5 mm. broad.

Cephalothorax.—Dark brown, hairy, arched. *Pars cephalica* truncated in front, ascending, segmental groove distinct; *ocular area* broader than long; raised; *clypeus* dull grey, sloping forward, narrow, indented at middle. *Pars thoracica* retreating posteriorly, radial grooves distinct; *thoracic fovea* procurved; *marginal band* slightly reflexed, thickly fringed with fine hairs. *Eyes*.—Distributed over two rows of four each; front row slightly procurved, the rear recurved; front lateral eyes largest of the group, elliptical, and poised obliquely; anterior medians smaller than their lateral neighbours, round, separated from each other by a space equal to one-half their own individual diameter, and each again from its lateral neighbour by about the same space; the rear laterals are also elliptical, and seated obliquely, each just touching the apex of its anterior neighbour; rear medians small; widely separated, and each just touching its lateral neighbour (Pl. xxiii., fig. 91). *Legs*.—Moderately long, concolorous with cephalothorax, densely clothed with long, dark brown hairs, and displaying naked areas; each armed with long, black spines; metatarsi i. and ii. partially scopulated, the tarsi fully so; relative lengths: 4, 1, 2, 3. *Palpi*.—Rather long, moderately strong, concolorous with legs, densely hairy, and armed with black spines; tarsi scopulated. *Falces*.—Well projected, strong, thickly clothed with coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with seven strong teeth, in addition to which, there is at the base, an intermediate group of four very minute ones; *fang* long, well curved, shining, dark brown. *Maxillæ*.—Dark brown, hairy, heel well rounded, and thickly studded with small spines; beard reddish grey. *Labium*.—Concolorous, submerged, short, broader than long, sparingly hairy, apex slightly

excavated, and thickly fringed with strong bristles. *Sternum*.—Somewhat pyriform, concolorous also, arched, hairy; *sigilla* marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, dark brown, densely hairy. *Spinnerets*.—Concolorous with abdomen, hairy; first joint of superior pair longest, and the second shortest; inferior spinners short, cylindrical, and separated from each other by a space equal to once their individual transverse diameter.

Obs.—The specimen from Langhorne's Creek had apparently only recently cast its skin; besides this, it was also damaged.

Hab.—Pichi Richi, and Langhorne's Creek, South Australia.

ANAME GRANDIS, *sp. nov.*

(Pl. xv., fig. 25, and Pl. xxiii., fig. 92.)

♀. Cephalothorax, 12·5 mm. long, 11·3 mm. broad; abdomen, 18·1 mm. long, 12·3 mm. broad (Pl. xv., fig. 25).

Cephalothorax.—Obovate, moderately hairy, mahogany brown, arched. *Pars cephalica* ascending, truncated in front, where it is furnished with a tuft of bristles at the middle; *ocular area* broader than long, raised, black; *clypeus* hyaline, rather broad, sloping steeply, indented at middle. *Pars thoracica* retreating posteriorly, radial grooves distinct; *thoracic fovea* deep, moderately procurved; *marginal band* broad, slightly reflexed, fringed with rather long, fine, grey hairs. *Eyes*.—Distributed over two rows of four each, compactly grouped; front row slightly procurved, the rear recurved; front and rear lateral eyes of equal size, elliptical, seated obliquely, their points just touching; front median eyes round, separated from each other by a space equal to once their own individual diameter, and again from their lateral neighbours by about half that space; rear intermediates small, elliptical, widely separated, each touching its lateral neighbour (Pl. xxiii., fig. 92). *Legs*.—Concolorous with cephalothorax, strong, tapering, moderately long, hairy, but displaying naked areas; each armed with strong black spines; metatarsi i. and ii. partially scopulated, the tarsi fully so; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, strong, concolorous with legs, hairy, spined; tarsi scopulated. *Palces*.—Dark brown, projected well forward, clothed with fine hairs and coarse bristles, and displaying naked areas; inner margin of the furrow of each falx armed with a row of nine strong teeth, in addition to which there is an intermediate group of four minute ones at the base; *fang* long, black, shining, well curved. *Mandible*.—Yellowish, clothed with long hairs, heel well rounded and thickly studded with small spines; beard reddish. *Labium*.—Concolorous, submerged, moderately hairy, arched, short, and fringed with bristles. *Sternum*.—Concolorous also, moderately hairy, shield-shaped, arched; *sigilla* marginal. *Abdomen*.—Obovate, arched, hairy, slightly projecting over base of cephalothorax, yellow-brown, with a dark brown median area extending on its upper surface from anterior extremity towards the spinnerets. *Spinnerets*.—Yellowish, hairy; superior pair tapering and having their first and second joints of equal length and the third joint the longest; inferior spinners short, narrowest at base, and separated from each other by a space equal to once their apical transverse diameter.

Obs.—Two specimens of this fine spider were collected at Pichi Richi and one at Woolshed Flat. Of the former one is fully matured, and the other nearly so. The latter are somewhat lighter in colour than the type.

Hab.—Pichi Richi and Woolshed Flat, South Australia.

ANAME AUREA, *sp. nov.*

(Pl. xxiii., fig. 93.)

♀. Cephalothorax, 10·4 mm. long, 8·2 mm. broad; abdomen, 13·4 mm. long, 8·2 mm. broad.

Cephalothorax.—Obovate, yellow, shining, sparingly clothed with yellow, adpressed hairs. *Pars cephalica* ascending, high, sides somewhat declivous, truncated in front, where there is at the middle a cluster of short black bristles; segmental groove distinct; *ocular area* raised, broader than long, yellow, but black at the summit; *clypeus* hyaline, moderately broad, sloping forward, indented at the middle. *Pars thoracica* retreating rearwards, radial grooves distinct; *thoracic forea* procurved; *marginal band* thickly fringed with fine hairs. *Eyes.*—Distributed over two rows of four each; front row slightly procurved, the rear recurved; anterior laterals elliptical, poised obliquely, and distinctly the largest of the group; anterior medians round, separated from each other by a space equal to one-half their individual diameter, and each again from its lateral neighbour by about one-half that distance; rear laterals considerably smaller than their anterior lateral neighbours which they touch, elliptical, poised obliquely; rear medians minute, widely separated, elliptical also, each touching its lateral neighbour (Pl. xxiii., fig. 93). *Legs.*—Concolorous with cephalothorax, moderately long and strong, clothed with long, fine black hairs, but displaying naked areas; armed with short black spines; metatarsi i. and ii. partially scopulated, the tarsi wholly so; relative lengths: 4, 1, 2, 3. *Palpi.*—Similar in colour, clothing and armature of legs; tarsi scopulated. *Falces.*—Orange-red, projected well forward, thinly clothed with fine yellowish hairs and long, strong, black bristles; inner ridge of the furrow of each falx armed with a row of twelve strong teeth, in addition to which there is an intermediate series of four minute ones at the base; *fang* long, dark brown, shining, well curved. *Maxillae.*—Yellow, arched, clothed with long, black hairs, heel well rounded and thickly studded with small, black spines. *Labium.*—Concolorous, small, broader than long, arched, submerged, sparingly clothed with moderately long, stiff black hairs; apex gently rounded, fringed with coarse bristles. *Sternum.*—Concolorous also, shield-shaped, rather flat, surface sparingly clothed with short, stiff black bristles, and the margins fringed with long black ones; *sigilla* marginal, orange-red, the posterior pair elongate and narrow. *Abdomen.*—Obovate, slightly overhanging base of cephalothorax, arched, yellow, and clothed with fine yellowish hairs. *Spinnerets.*—Yellow, hairy, superior pair tapering, the first joint longest, and the second shortest; inferior spinners cylindrical, and separated from each other by a space equal to once their individual transverse diameter.

Obs.—Four fully matured females, collected by Dr. McGillivray. *A. aurea* is a very distinct form, and is easily distinguished by its colour, the smallness of its rear lateral and median eyes, and the form of its posterior sternal sigilla.

Hab.—Broken Hill, New South Wales.

ANAME FLAVOMACULATA, *sp. nov.*

(Pl. xxiii., fig. 94.)

♀. Cephalothorax, 10·2 mm. long, 8·2 mm. broad; abdomen, 13·6 mm. long, 8·2 mm. broad.

Cephalothorax.—Obovate, shining, dark mahogany brown, arched, sparingly clothed with short, adpressed hairs. *Pars cephalica* high, ascending, truncated in front, sides somewhat declivous, segmental groove distinct; *ocular area* raised, broader than long; *clypeus* not broad, sloping gently forward, dark brown with a small yellowish patch at the middle, where there is also a tuft of stiff bristles. *Pars thoracica* broad, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* slightly reflexed, sparingly fringed with fine yellowish hairs. *Eyes.*—Distributed over two rows of four each; the front row slightly procurved, and the rear decidedly recurved; eyes of front row large; anterior laterals largest of the group, elliptical, and poised obliquely; anterior medians round, separated from each other by a space equal to about one-half their individual diameter, and each again from its lateral neighbour by about one-half that space; rear lateral eyes elliptical, poised obliquely, each just touching its anterior lateral neighbour; rear medians widely separated, elliptical, smallest of the group, each touching its lateral neighbour (Pl. xxiii., fig. 94). *Legs.*—Moderately long and strong, tapering, reddish-brown, hairy, but displaying naked areas; each armed with strong spines; metatarsi i. and ii. partially scopulated, the tarsi wholly so; relative lengths: 4, 1, 2, 3. *Palpi.*—Long, moderately strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Fulces.*—Concolorous with cephalothorax, projected well forward, clothed with fine hairs and long, coarse bristles, but displaying naked areas; inner angle of the furrow of each falx armed with a row of ten strong teeth, in addition to which there is an intermediate series of six minute ones at the base; *fang* long, well curved, black, shining. *Maxille.*—Reddish-brown, inner angle yellowish, arched, hairy, heel well rounded, and thickly studded with short spines; beard reddish. *Labium.*—Concolorous also, arched, short, broader than long, submerged, apex excavated and fringed with black bristles. *Sternum.*—Concolorous also, shield-shaped, slightly arched, clothed with moderately long stiff black hairs; *sigilla* marginal. *Abdomen.*—Oval, slightly overhanging base of cephalothorax, arched, superior surface and sides brown, spotted with yellow, densely clothed with yellowish pile, and having in addition a number of short, black bristles, at anterior extremity; area above and at sides of spinnerets yellow; inferior surface dark brown, spotted with yellow; pulmonary sacs yellow; chitinous plate in front of *rima epigasteris*

clothed with fine yellowish hairs and long, black bristles, brownish yellow at the middle, and pale yellow laterally; in front the plate is acuminate, and creamy yellow. *Spinnerets*.—Superior pair tapering, hairy, dark brown, apices of first and second joints yellow; second joint shortest, and the third slightly the longest; inferior spinners somewhat club-shaped, hairy, dark brown, inner angles yellow; they are separated from each other by a space equal to once their individual transverse diameter.

Obs.—Two female examples, one of which is mature and the other half-grown. Field note reads: "No door."

Hab.—Tambourine Mountain, Queensland (October 6th, 1912).

ANAME NEBULOSA, sp. nov.

(Pl. xxiii., figs. 95, 96, 97 and 98.)

♂. Cephalothorax, 5.6 mm. long, 4.4 mm. broad; abdomen, 5.1 mm. long, 3.2 mm. broad.

Cephalothorax.—Obovate, yellowish, clothed with dark brown hairs, which latter impart a smoky appearance, arched. *Pars cephalica*.—Ascending, truncated in front, segmental groove distinct, the groove and frontal area smoky; *ocular area* broader than long, raised; *clypeus* narrow, pale, not sloping. *Pars thoracica* broad, sides curved, posterior angle narrow, radial grooves smoky yellow, distinct; *thoracic fovea* deep, very slightly procurved; *marginal band* moderately broad, smoky yellow, fringed with long black hairs. *Eyes*.—Distributed over two rows of four each; front row procurved, the rear recurved; eyes of front row large; anterior laterals elliptical and poised obliquely; anterior medians round, and largest of the series; space between each eye of the front row sensibly less than one-half the individual diameter of one of the median anterior eyes; rear side eyes rather smaller than their anterior lateral neighbours; points of anterior and rear lateral eyes just meet; rear intermediates small, widely separated, each touching its lateral neighbour (Pl. xxiii., fig. 95). *Legs*.—Long, not strong, tapering, yellow, hairy, but displaying narrow naked areas, each well armed with long, dark spines; metatarsi i. and ii. partially scopulated, the rear fully so; no apophysis present on tibia i.; relative lengths: 4, 1, 2, 3. *Pulpi*.—Moderately long, similar in colour and clothing to legs, and armed with short, weak spines; tarsal joint scopulated; bulb pyriform, bilobed, twisted, yellow, shining and terminating in a short, blunt style; no apophysis present (Pl. xxiii., fig. 96). *Palces*.—Short, not strong, smoky yellow, projecting, clothed with short fine hairs and coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with several moderately strong teeth. *Maxilla*.—Yellow, arched, hairy, heel well rounded, near which latter there is a small cluster of microscopic spines; beard yellow. *Labium*.—Concolorous, arched, short, much broader than long, narrowest at apex, which latter is gently rounded and fringed with long black bristles; a few hairs are scattered over the surface; two or three small spines are also present near the apex.

Sternum.—Concolorous also, elongate, broadest between second and third pairs of coxæ, moderately arched, hairy; *sigilla* marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, yellow, with undefined smoky areas, densely clothed with long hairs. *Spinnerets*.—Yellow, hairy, superior pair long, tapering, second joint shortest; inferior pair very short, and close together.

Obs.—One male.

Hab.—Mallala, South Australia (March 23, 1905).

♀. Cephalothorax, 8·8 mm. long, 6·1 mm. broad; abdomen, 14·4 mm. long, 8·3 mm. broad.

Cephalothorax.—Obovate, arched, smoky yellow, pilose. *Pars cephalica* ascending, moderately high, truncated in front, where there is a tuft of black bristles at the middle, thoracic grooves distinct; *ocular area* broader than long, slightly raised; *clypeus* narrow, hyaline, sloping forward, slightly indented at middle. *Pars thoracica* very gently retreating towards posterior angle, which latter is deeply indented, radial grooves distinct; *thoracic forea* procurved, deep; *marginal band* pallid, fringed with moderately long dark hairs. *Eyes*.—Disposed similarly to male; the posterior laterals are, however, as large as their anteriors (Pl. xxiii., fig. 97). *Legs*.—Moderately long, yellow, clothed with dark brown hairs, but displaying naked areas; each armed with short stiff spines; metatarsi i. and ii. partially scopulated, the tarsi wholly so; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, not strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Falces*.—Dark brown, projected, strong, moderately long, clothed with fine hairs and coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with a row of ten strong teeth; *fang* long, dark brown, shining, well curved. *Maxille*.—Yellow, hairy, arched, heel well rounded; above the latter there is a cluster of small spines; beard reddish. *Labium*.—Concolorous, short, broader than long, well arched, submerged, hairy, and furnished near apex with two or three small spines; apex slightly excavated, fringed with stiff bristles. *Sternum*.—Concolorous also, somewhat shield-shaped, arched, clothed with black bristles; *sigilla* marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, clothed with fine downy hairs; superior surface yellow, mottled with dark chocolate-brown, the latter forming a defined median design with lateral markings; sides yellow, mottled moderately with dark brown; inferior surface yellow (Pl. xxiii., fig. 98). *Spinnerets*.—Yellow, hairy; superior spinners rather long, tapering, first and third joints of about equal length, the second shortest; inferior spinners very short, and quite close together.

Obs.—The number of spines on the lip varies in different individuals of this species; in some there are three or four, in others two, whilst in one example before me only one is discernable. In some examples the abdominal pattern is more distinct than in others.

Hab.—Mallala, Aldgate, Tea Gardens (foot of Hills near Adelaide, November 4, 1917), Meningal (July, 1917), Scott's Creek, South Australia.

ANAME DECORA, *sp. nov.*

(Pl. xxiii., figs. 99, 100 and 101.)

♀. Cephalothorax, 10·2 mm. long, 7·8 mm. broad; abdomen 10·4 mm. long, 6·7 mm. broad.

Cephalothorax.—Elongate, obovate, yellow, sparingly clothed with very fine, pale yellowish hairs. *Pars cephalica* ascending, moderately high, truncated in front, segmental groove distinct; *ocular area* broader than long, raised, nearly black at summit; *clypeus* hyaline, moderately broad, steep, slightly excavated at middle. *Pars thoracica* retreating, posterior angle indented, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* fringed with fine hairs. *Eyes*.—Distributed over two rows of four each; front row procurved, the rear recurved; anterior and rear side eyes largest of the group, of equal size, elliptical, and poised obliquely; anterior medians round, separated from each other by a space equal to once their own individual diameter, and each again from its lateral neighbour by about one-half that space; rear laterals widely removed, elliptical, each slightly smaller than its lateral neighbour which it touches (Pl. xxiii., fig. 99). *Legs*.—Concolorous with cephalothorax, moderately long, tapering, hairy, but displaying naked areas; each armed with moderately long spines; metatarsi and tarsi i. and ii. partially scopulated. *Palpi*.—Moderately long, similar in colour, clothing and armature to legs; tarsi scopulated. *Fulves*.—Dark brown, projecting, clothed with fine hairs and long, coarse bristles; inner margin of the furrow of each falx armed with a row of ten strong teeth; *fang* dark brown, shining, well curved. *Maxillæ*.—Arched, hairy, yellow, inner angle cream-yellow, and fringed with a reddish beard, heel well rounded; at the excavated angle above the latter there is a cluster of small spines. *Labium*.—Similar in colour and clothing to the maxillæ, submerged, short, broader than long; near the apex, which is slightly excavated, there are three small spines. *Sternum*.—Elongate, somewhat shield-shaped, yellow, arched, clothed with bristly hairs, and terminating just between fourth pair of coxæ in an obtuse point; *sigilla* marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, clothed with fine, short hairs; superior surface yellow with chocolate brown spots and median and lateral markings, the latter broken and forming a rather prominent, though undefined pattern (Pl. xxiii., fig. 101); sides yellow with chocolate brown spots; inferior surface ochreous yellow with a few chocolate brown spots and concolorous median and lateral markings; *pulmonary sacs* yellow; chitinous plate immediately in front of *rima epigasteris* shining, yellow, hairy, uneven, strongly arched at middle and compressed laterally. *Spinnerets*.—Yellow, hairy; superior pair tapering; first and third joints of equal length, second joint shortest; inferior spinners short, narrowest at the base, and separated from each other by a space equal to once their individual transverse diameter.

Obs.—This species presents another instance in which ocular malformation occurs and again, as in the case of *A. hirsuta* (*ante*, p. 142), the right side is affected, but in an example now under study, the rear laterals

and rear median eyes have coalesced, and so form one large, somewhat uniform eye. The front row of eyes is perfectly normal, and the cephalothorax is not injured in any way (Pl. xxiii., fig. 100).

Hab.—Clifton Gardens, Sydney, New South Wales.

ANAME ARMIGERA, *sp. nov.*

(Pl. xxiii., figs. 102 and 103.)

♀. Cephalothorax, 8.8 mm. long, 7.3 mm. broad; abdomen, 9 mm. long, 6.2 mm. broad.

Cephalothorax.—Obovate, arched, yellow, moderately clothed with fine, short pale yellowish hairs. *Pars cephalica* ascending, truncated in front where it is furnished at the middle with a tuft of stiff black bristles, sides compressed, somewhat declivous, segmental groove distinct; *ocular area* broader than long, raised; *clypeus* narrow, hyaline, slightly excavated at middle. *Pars thoracica* broad, radial grooves moderately distinct; *thoracic fovea* profound, slightly procurved; *marginal band* pale, broad, fringed with dark, moderately strong bristles. *Eyes.*—Distributed over two rows of four each, the front row being procurved, and the rear recurved; front laterals largest of the group, elliptical and poised obliquely; front medians round, separated from each other by a space equal to one-half their individual diameter, and each again from its lateral neighbour by about the same space; posterior lateral eyes smaller than their anterior lateral neighbours which they just touch, elliptical, and poised obliquely; rear medians smallest of the group, widely separated, elliptical also, each touching its lateral neighbour (Pl. xxiii., fig. 102). *Legs.*—Moderately long and strong, concolorous with cephalothorax, clothed with short, fine yellowish hairs and long coarse black bristles, but displaying naked areas; each well armed with long strong black spines, those on tibiae and metatarsi i. and ii. being the most numerous, and the longest and strongest; metatarsi i. and ii. partially scopulated, the tarsi fully so; relative lengths: 4, 1, 2, 3. *Palpi.*—Moderately long and strong, similar in colour and clothing to legs, and armed with long, strong, black spines; tarsi scopulated. *Falces.*—Concolorous with cephalothorax, long, strong, arched, projected well forward, clothed with short, fine, silky pubescence and coarse, black bristles, but displaying naked areas; the upper inner angle of each falx is armed with moderately long and strong black spines similar to those on the legs (Pl. xxiii., fig. 103); inner ridge of the furrow of each falx armed with a row of seven strong teeth, in addition to which there is also present at the base an intermediate series of five microscopic teeth; *fauces* long, dark brown, shining, well curved. *Maxillae.*—Clay yellow, surface rather flat, clothed with long, dark hairs and bristles, heel well rounded, base thickly studded with small spines, beard yellowish. *Labium.*—Short, free concolorous, submerged, broader than long, arched, clothed with a few long black bristles, apex slightly excavated, and fringed with black bristles; near apex there are three small spines. *Sternum.*—Concolorous also, broad, rather flat, well clothed with black bristles, of which the marginal ones are much the longest and strongest; *sigilla* not distinct, small, marginal.

Abdomen.—Obovate, arched, slightly overhanging base of cephalothorax, hairy, and furnished in front with a few rather long, black bristles; superior surface yellow, mottled with dark brown, but displaying no design; sides and inferior surface yellow, densely clothed with a mixture of fine yellow and rather long and stiff dark brown hairs; *pulmonary sacs* and chitinous plate in front of *rima epigasteris* yellow, shining, and clothed with stiff black hairs; two *sigilla* present on chitinous plate. *Spinnerets*.—Yellow, hairy; superior pair tapering, second joint shortest; inferior spinners cylindrical, nearly as long as basal joint of superior pair, separated from each other by a space equal to that of once their own individual transverse diameter.

Hab.—Mullawa, West Australia, collected by Miss F. May.

ANAME MACULATA, *sp. nov.*

(Pl. xxiii., fig. 104.)

♀. Cephalothorax, 7·3 mm. long, 6·2 mm. broad; abdomen, 10·5 mm. long, 7·4 mm. broad.

Cephalothorax.—Obovate, yellow, arched, clothed with fine yellowish pubescence. *Pars cephalica* ascending gently, not high, truncated in front, furnished at middle with a tuft of black bristles, segmental groove distinct; *ocular area* broader than long, raised, summit black; *clypeus* narrow, hyaline. *Pars thoracica* rather broad, uneven, radial grooves almost completely obscured by the dense clothing of pile; *thoracic fovea* very slightly procurved; *marginal band* slightly reflexed, and fringed with very fine hairs. *Eyes*.—Distributed over two rows of four each; front row slightly procurved and the rear recurved; front laterals elliptical and poised obliquely, slightly larger than their rear lateral neighbours which are also elliptical and poised obliquely, and which they just touch; anterior medians largest of the group, round, separated from each other by a space equal to about three-quarters their own individual diameter, and each again from its lateral neighbour by less than one-half the diameter of one of the anterior median eyes; rear intermediate eyes smallest of the group, widely separated from each other, each just touching its lateral neighbour (Pl. xxiii., fig. 104). *Legs*.—Moderately long, not strong, tapering, yellow, hairy, but displaying naked areas, armed with long, black spines, those on tibiae, and metatarsi iii. and iv. being the strongest and most numerous; metatarsi i. and ii. partially scopulated, the tarsi fully so; relative lengths: 1, 4, 2, 3. *Palpi*.—Moderately long, strong, similar in colour and clothing to legs, and armed with strong spines; tarsi scopulated. *Falces*.—Concolorous with cephalothorax, projected well forward, clothed with fine hairs and long coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with nine strong teeth, in addition to which there is at the base, an intermediate series of four minute ones; *fang* long, well curved, reddish brown, shining. *Maxille*.—Yellow, arched, hairy, furnished at base with a dense cluster of small spines, heel well rounded. *Labium*.—Concolorous, moderately hairy, short, broader than long, apex very slightly excavated. *Sternum*.—Concolorous also, somewhat shield-shaped, arched, hairy, angles fringed with long, black bristles; *sigilla* not distinct, small, marginal. *Abdomen*.—Obovate, arched, slightly

overhanging base of cephalothorax, clothed with short, fine hairs; superior surface and sides dark brown, mottled with pale yellow spots; inferior surface hairy, yellow, flecked with irregular clusters of brown spots in front of spinnerets. *Spinnerets*.—Yellow, hairy; superior pair elongate, tapering, second joint shortest, first and third of equal length; inferior spinners cylindrical, close together, and about one-half the length of joint i. of superior spinners.

Obs.—Collector's note: "No door to burrow; spun across with web."

Hab.—Jarrahdale Road, Armadale, West Australia (May 26, 1912).

ANAME CENOSA, sp. nov.

(Pl. xxiii., fig. 105.)

♀. Cephalothorax, 7.5 mm. long, 6.4 mm. broad; abdomen, 10.9 mm. long, 7.5 mm. broad.

Cephalothorax.—Obovate, yellow-brown, arched, furnished with a few scattered, fine, yellowish hairs. *Pars cephalica* not very high, ascending gently, smooth, pencilled with dark brown down the middle, segmental groove distinct; *ocular area* raised, broader than long, dark brown; *clypeus* narrow, hyaline, and furnished at the middle with a tuft of black bristles. *Pars thoracica* broad, uneven, radial grooves profound; *thoracic fovea* deep, procurved; *marginal band* slightly reflexed, fringed with fine yellowish hairs. *Eyes*.—Distributed over two rows of four each; front row very slightly procurved, the rear recurved; front and rear laterals touching each other, elliptical and obliquely poised; of these the former is slightly the largest; anterior median eyes large, round, separated from each other by a space equal to about one-half their individual diameter, and each again from its lateral neighbour by about the same space; rear medians very small, elliptical, widely removed, each just touching its lateral neighbour (Pl. xxiii., fig. 105). *Legs*.—Yellow, tapering, not strong, hairy, but displaying naked areas, each armed with strong spines, those on tibiae iii. and iv. being the longest and strongest; scopulation normal; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, similar in colour and clothing to legs, armed with strong spines; tarsi scopulated. *Falces*.—Concolorous with cephalothorax, strong, moderately projected, clothed with fine hairs and coarse bristles, but displaying extensive naked areas; inner ridge of the furrow of each falx armed with nine strong teeth; *fang* long, well curved, shining, reddish brown. *Maxillae*.—Yellow, hairy, arched, heel well rounded, and furnished with a few small spines. *Labium*.—Concolorous, short, broader than long, arched, hairy, apex excavated, and fringed with bristles. *Sternum*.—Concolorous also, broad, shield shaped, rather flat, clothed with long, dark bristles; *sigilla* marginal. *Abdomen*.—Obovate, arched, hairy, slightly overhanging base of cephalothorax; superior surface and sides dark brown, mottled with dull yellow spots; inferior surface yellow-brown. *Spinnerets*.—Yellow, hairy; superior pair not very long, rather widely apart, tapering, second joint shortest; inferior pair very short, about twice their individual diameter apart.

Hab.—Little Kalkabury, Yorke Peninsula, South Australia (September, 1907).

ANAME FUSCOCINCTA, *sp. nov.*

(Pl. xxiv., fig. 106.)

♀. Cephalothorax, 7.4 mm. long, 5.6 mm. broad; abdomen, 7.4 mm. long, 4.6 mm. broad.

Cephalothorax.—Obovate, yellow-brown, arched, sparingly clothed with fine yellowish hairs. *Pars cephalica* ascending, moderately high, truncated in front where it is furnished at the middle with a tuft of stiff bristles, thoracic groove distinct; *ocular area* raised, black, broader than long; *clypeus* broad, hyaline, deeply indented at middle. *Pars thoracica* uneven, radial grooves profound; *thoracic fovea* deep, procurved; *marginal band* broad, reflexed, dark brown, fringed with rather long, yellowish hairs. *Eyes*.—Distributed over two rows of four each; front row procurved, the rear recurved; anterior median eyes round, largest of the series, and separated from each other by a space equal to that of one-half their own individual diameter, and each again from its lateral neighbour by about one-half that space; front and rear lateral eyes elliptical, obliquely poised, and just touching each other; front laterals rather larger than their rear neighbours; rear median eyes widely removed, smallest of the group, somewhat elliptical, obliquely poised, each just touching its lateral neighbour (Pl. xxiv., fig. 106). *Legs*.—Concolorous with cephalothorax, moderately long, tapering, not strong, hairy, but displaying naked areas, spines rather long, but weak; scopulation of metatarsi and tarsi i. and ii. normal; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, not strong, similar in colour and clothing to legs; tibial spines strong; tarsi scopulated. *Falces*.—Concolorous with cephalothorax, projected well forward, clothed with fine hairs and coarse bristles; inner ridge of the furrow of each falx armed with a row of ten strong teeth, in addition to which there is at the base an intermediate series of six minute ones; *fang* long, dark brown, shining, well curved. *Maxillæ*.—Yellow, arched, hairy, heel well rounded, and thickly studded with small spines. *Labium*.—Concolorous, short, broader than long, arched, submerged, surface furnished with a few bristles, apex slightly excavated, and fringed with bristles. *Sternum*.—Concolorous also, shield-shaped, arched, moderately clothed with black bristles; *sigilla* marginal. *Abdomen*.—Obovate, arched, slightly overhanging base of cephalothorax, densely clothed with long hairs; superior surface dark brown, the sides yellow-brown; inferior surface yellow. *Spinnerets*.—Yellow, hairy; superior pair rather long, tapering, the first joint longest and the second shortest; inferior spinners cylindrical, nearly as long as basal joint of superior spinnerets, separated from each other by a space equal to once their individual transverse diameter.

Obs.—Collector's note: "Open tube; thickly lined with web, not carried above the surface. Tube 4 in. deep."

Hab.—Kalamunda, near Perth, West Australia (May 17, 1912).

ANAME PULCHRA, *sp. nov.*

(Pl. xxiv., figs. 107 and 108.)

♂. Cephalothorax, 7.5 mm. long, 6 mm. broad; abdomen, 5.8 mm. long, 3.8 mm. broad.

Cephalothorax.—Obovate, arched, dark brown, densely clothed with pale yellowish pile. *Pars cephalica* very gently ascending, not high, truncated in front, sides rather declivous, segmental groove almost hidden by the dense pile with which the carapace is clothed; *ocular area* raised, broader than long, furnished in front with a tuft of stiff bristles; *clypeus* pallid, narrow. *Pars thoracica* broad, radial grooves almost hidden by thick pile; *thoracic forea* deep, straight; *marginal band* fringed with rather long, fine yellowish hairs. *Eyes*.—Distributed over two rows of four each; front row strongly procurved, the rear recurved; front median eyes round, largest of the group, separated from each other by a space equal to about one-third their own individual diameter, and each again from its lateral neighbour by about half a diameter; anterior and posterior lateral eyes slightly elliptical and poised obliquely; of these the rear lateral eyes are the smallest; side eyes separated from each other by a space equal to about the diameter of one of the rear lateral eyes; rear median eyes minute, each in close juxtaposition to a front anterior and a rear lateral eye (Pl. xxiv., fig. 107). *Legs*.—Long, tapering, not strong, concolorous with cephalothorax, hairy, but showing naked areas, and armed with spines of which those on tibiae and metatarsi iii. and iv. are the longest and strongest; scopulation normal; no apophysis present on tibia i.; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, not strong, similar in colour and clothing to legs; tarsal joint short, scopulated; bulb dark brown, shining, pyriform, bilobed, and terminating in a moderately long, pointed style; tibial joint furnished with spined apophysis (Pl. xxiv., fig. 108). *Falces*.—Dark brown, slightly projected, hairy, but displaying naked areas; several moderately strong teeth on the inner ridge of the furrow of each falx; *fang* reddish brown, shining. *Maxillae*.—Yellow, arched, heel well rounded. *Labium*.—Concolorous, arched, moderately hairy, broader than long, submerged, apex gently excavated, and fringed with bristles. *Sternum*.—Concolorous also, elongate, shield-shaped, rather flat, hairy; *sigilla* small, marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, densely clothed with long brown and yellowish hairs; superior surface dark brown, relieved by an interrupted median narrow longitudinal yellow band and transverse lateral yellow bars, the two broadest of which are at the middle; the longitudinal band and transverse bars spotted with dark brown; inferior surface chrome yellow, tinged in places with brown. *Spinnerets*.—Pale yellow, hairy; basal joint of superior pair longest, the terminal very short and dome-shaped; inferior spinners minute, close together.

Obs.—Collector's note reads: "Under log, with burrow covered by simple web."

Hab.—Tambourine Mountain, Queensland (October, 1912).

ANAME ROBUSTA, *sp. nov.*

(Pl. xxiv., fig. 109.)

♀. Cephalothorax, 12.2 mm. long, 11.3 mm. broad; abdomen, 12.5 mm. long, 6.8 mm. broad,

Cephalothorax.—Obovate, broad, arched, yellow, very sparingly clothed with silky pubescence. *Pars cephalica* ascending, truncated, in front, where it is yellowish red, pencilled with brown down the middle, sides declivous; segmental groove distinct; *ocular area* broader than long, close to edge of clypens, raised, summit dark brown; *clypeus* narrow, sloping slightly forward, hyaline, and furnished with a tuft of bristles at the middle. *Pars thoracica* broad, retreating somewhat sharply to posterior angle, uneven, radial grooves rather broad, but not deep, posterior angle narrow; *thoracic fovea* deep, procurved; *marginal band* yellow, slightly reflexed, fringed with short, black bristles. *Eyes*.—Distributed over two rows of four each, the front row procurved, and the rear recurved; front and rear lateral eyes elliptical, poised obliquely, their black rings touching; front laterals largest of the group; anterior medians large, round, and separated from each other by a space equal to about three-quarters their own individual diameter, and each again from its lateral neighbour by a similar space; rear median eyes smallest of the group, widely separated from each other, and each just touching its lateral neighbour (Pl. xxiv., fig. 109). *Legs*.—Strong, moderately long, concolorous with cephalothorax, hairy, but displaying naked areas, each armed with spines, those on tibiae and metatarsi iii. and iv. being the most numerous and the strongest; scopulation of metatarsi and tarsi i. and ii. normal; relative lengths: 4, 1, 2, 3. *Palpi*.—Strong, moderately long, similar in colour and clothing to legs, armed with long, black spines; tarsi scopulated. *Falces*.—Yellow, darker than cephalothorax, strong, projected well forward, arched, inner angles of upper surface yellow brown, sparingly hairy and displaying extensive naked areas; apices densely clothed with long black bristles; inner ridge of the furrow of each falx armed with a row of nine strong teeth, in addition to which there is at the base an intermediate series of four or five minute ones; *fang* long, dark brown, shining, well curved. *Maxille*.—Yellow, hairy, arched, heel well rounded, and studded with a dense cluster of small spines. *Labium*.—Concolorous, arched, submerged, broader than long, furnished with a few bristles, apex gently excavated. *Sternum*.—Concolorous also, shield-shaped, arched, clothed with strong, black hairs or bristles, of which the marginal ones are much the longest and strongest; *sigilla* elongate, marginal, narrow. *Abdomen*.—Obovate, arched, moderately overhanging base of cephalothorax, dark brown, densely clothed with long hairs. *Spinnerets*.—Yellow, hairy; superior pair tapering, first and third joints longest, and of equal length; inferior pair very short, cylindrical, and separated from each other by a space equal to once their individual transverse diameter.

Hab.—Cross Roads, Mannum, South Australia (April, 1908).

ANAME CONFUSA, *sp. nov.*

(Pl. xxiv., fig. 110.)

♀. Cephalothorax, 9.2 mm. long, 7.5 mm. broad; abdomen, 11.1 mm. long, 7 mm. broad.

Cephalothorax.—Obovate, elongate, yellow, arched, hairy. *Pars cephalica* ascending, rather high, truncated in front, sides declivous,

segmental groove distinct; *ocular area* broader than long, fringed in front with a tuft of bristles, summit black; *clypeus* rather narrow, sloping forward, slightly excavated at the middle. *Pars thoracica* uneven, radial grooves not deep, partially obscured by hairs; *thoracic fovea* deep, procurved; *marginal band* yellow, undulated, rather broad, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each; front row slightly procurved and the rear slightly recurved; anterior and rear lateral eyes of equal size, nearly touching each other, elliptical, obliquely poised, anterior medians largest of the group, round, separated from each other by a space equal to once their own individual diameter, and each again from its lateral neighbour by about the same space; rear median eyes smallest of the group, but not minute, widely separated from each other, elliptical, each just touching its lateral neighbour (Pl. xxiv., fig. 110). *Legs*.—Concolorous with cephalothorax, strong, hairy, but displaying naked areas, each armed with long but not very strong spines; scopulation of metatarsi and tarsi i. and ii. normal; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, similar in colour, clothing and armature to legs; tarsi scopulated. *Falces*.—Yellowish brown, projected well forward, clothed with fine hairs and long, coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with seven strong teeth; *femur* long, dark brown, shining, well curved. *Maxille*.—Yellow, arched, hairy, furnished with a few small spines at base of inner angle, heel well rounded. *Labium*.—Concolorous, somewhat submerged, short, broader than long, apex slightly excavated and fringed with long, strong bristles, below which latter there are two or three small spines. *Sternum*.—Concolorous also, shield-shaped, arched, hairy; *sigilla* marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, hairy; superior surface yellow, mottled with chocolate-brown patches and spots, both of which latter form a somewhat confused design; sides and inferior surface yellow. *Spinnerets*.—Yellow, hairy; superior pair tapering, first and second joints longest and of equal length; inferior pair very short, cylindrical, and separated from each other by a space equal to once their own individual transverse diameter.

Hab.—Mylor Road, South Australia (October, 1908).

ANAME CONFUSA, var. *a*, var. *nov*.

♀. Cephalothorax, 9 mm. long, 7 mm. broad; abdomen, 8.4 mm. long, 5 mm. broad.

In all details except those of size and abdominal colour and clothing, var. *a* agrees with the example chosen as the type. Its description is as follows:—

Abdomen.—Obovate, arched, slightly overhanging base of cephalothorax, densely clothed with very long hairs; superior surface dark brown, with one large round yellow spot near anterior extremity; in addition to this there is also a number of small and obscure yellowish spots; sides dark brown, obscurely mottled with yellow; inferior surface yellow with dark brown areas in front, and at the sides of the spinnerets, the latter, which are also yellow, are clothed with dark brown hairs.

Obs.—*Var. a* of this species bears a rather close resemblance to *A. fuscocincta* (*aut.* p. 153); the eyes, however, are very different; moreover, *fuscocincta* has no labial spines.

Hab.—Mylor Road, South Australia (October, 1908).

ANAME INTRICATA, sp. nov.

(Pl. xxiv., fig. 111.)

♀. Cephalothorax, 8 mm. long, 5.5 mm. broad; abdomen, 9.1 mm. long, 5.5 mm. broad.

Cephalothorax.—Obovate, yellow, arched, sparingly pubescent. *Pars cephalica* moderately high, ascending, segmental groove distinct; *ocular area* raised, yellow-brown, broader than long; *clypeus* narrow, sloping forward, hyaline. *Pars thoracica* uneven, radial grooves distinct; *thoracic fovea* very slightly procurved; *marginal band* fringed with rather long black hairs. *Eyes.*—Distributed over two rows of four each, the front row procurved and the rear recurved; eyes of front row close together, the laterals being slightly the largest of the group, elliptical, and poised obliquely; anterior intermediates round; rear side eyes smaller than their anterior lateral neighbours, the apices of which they just touch, elliptical, and poised obliquely; rear intermediates smallest of the group, elliptical, widely separated, each just touching its outer neighbour (Pl. xxiv., fig. 111). *Legs.*—Concolorous with cephalothorax, hairy, but displaying naked areas, moderately strong, rather long, tapering, armed with long strong spines; scopulation of legs i. and ii. normal; relative lengths: 4, 1, 2, 3. *Palpi.*—Moderately long and strong, concolorous with legs, similar in armature and clothing to legs i. and ii. *Falces.*—Concolorous with cephalothorax, projected, moderately strong, clothed with fine hairs and stiff bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with a row of eight strong teeth, in addition to which there is an intermediate series of five minute ones; *fang* long, strong, shining, reddish brown, well curved. *Maxillae.*—Yellow, arched, clothed with long hairs, excavated round the tip where it is thickly studded with spines; heel well rounded. *Labium.*—Concolorous with foregoing, and similar to it in clothing, arched, broader than long, not spined, apex slightly excavated. *Sternum.*—Concolorous with labium, broad, somewhat shield-shaped, arched, clothed with rather long hairs, and margined with stiff bristles. *Abdomen.*—Obovate, arched, hairy, slightly overhanging base of cephalothorax; superior surface dark brown, intricately mottled with pale yellow; sides and inferior surface yellow. *Spinnerets.*—Pale yellow, hairy; superior pair tapering, first and third joints equally long, second joint shortest; inferior spinners very short, cylindrical, about twice their own individual transverse diameter apart.

Hab.—Blackwood River, South West Australia.

ANAME BUTLERI, sp. nov.

(Pl. xxiv., fig. 112.)

♀. Cephalothorax, 7 mm. long, 4.7 mm. broad; abdomen, 7.8 mm. long, 4.7 mm. broad.

Cephalothorax.—Obovate, arched, yellow-brown. *Pars cephalica* ascending, truncated in front, surface sparingly clothed with short, fine, yellowish hairs, segmental groove distinct; *ocular area* raised, broader than long; *clypeus* narrow. *Pars thoracica* moderately clothed with short, fine yellowish hairs, broadest at middle, from whence it retreats towards posterior angle, radial grooves distinct; *thoracic fovea* deep, procurved; *marginal band* broad, pallid. *Eyes*.—Distributed over two rows of four each; front row of eyes slightly procurved, and the rear row recurved; front lateral eyes largest of the group, elliptical, and poised obliquely; anterior median eyes round, and separated not only from each other, but also from their lateral neighbours by a space equal to about one-half that of their own individual diameter; lateral eyes of rear row somewhat smaller than their anterior lateral neighbours, the points of which they just touch, and distinctly larger than anterior median eyes; they are also elliptical and poised obliquely; rear medians widely separated; smallest of the group, elliptical, each just touching the ring of its lateral neighbour (Pl. xxiv., fig. 112). *Legs*.—Moderately long and strong, yellow, clothed with dark brown hairs, but displaying naked areas, and armed with long, not very strong, dark spines; metatarsi i. and ii. partially scopulated, and the tarsi fully so; relative lengths: 1, 2, 4, 3. *Palpi*.—Rather long, moderately strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Falces*.—Concolorous with cephalothorax, long, not strong, projected well forward, clothed with fine hairs and coarse bristles, but displaying naked areas; inferior ridge of the furrow of each falx armed with a row of nine strong teeth, in addition to which there is also near the base an intermediate row or cluster of minute teeth; *fung* long, dark brown, well curved. *Maxillæ*.—Yellow, hairy, arched, excavated at the base where there is a cluster of small spines; heel well rounded; beard reddish. *Labium*.—Concolorous, broader than long, arched, free; near the apex, which is fringed with long, strong bristles, there are three or four small spines. *Sternum*.—Concolorous also, shield-shaped, arched, rather thickly clothed with coarse black bristles; *sigilla* marginal, the posterior pair rather large. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, arched, hairy; superior surface and sides dark chocolate brown, spotted with yellow, the latter showing up very distinctly in alcohol; inferior surface yellow. *Spinnerets*.—Pale yellow, hairy; superior pair tapering, the first segment of which is sensibly the longest, and the second distinctly the shortest; inferior pair short, cylindrical, and separated from each other by a space equal to that of once their individual diameter.

Obs.—The specimen from which the above species is described was presented to the Trustees of the Australian Museum by Mr. S. Butler, of Melbourne, just as this paper was about to be passed on to the printer, and in his honour it has been named. In his field-note he says: "I dug it out of a six-inch burrow, sparsely lined with silk, on the banks of the Merri Creek, Melbourne."

Hab.—Merri Creek, Melbourne, Victoria.

Subfamily DIPLURINÆ.

Group DIPLUREÆ.

Genus *Chenistonia*, Hogg.*CHENISTONIA MAJOR*, Hogg.

(Pl. xvii., fig. 31, and Pl. xxiv., figs. 113 and 114.)

Chenistonia major, Hogg, Proc. Zool. Soc., 1901, p. 263, fig. 36.

Obs.—Several male and female examples of what is apparently *C. major*, Hogg, were collected at Morialta Gully and Mallala, South Australia. The female examples vary in size and somewhat in colouration, but otherwise agree very well with the author's brief description. There is a dark median area upon the superior surface of the different individuals, but the "mottly diagonal side stripes," to quote from the original description (*supra*) are by no means distinct.

The author quoted says:—"Among a good many females, I have not a male." In the series collected by one of us [R.H.P.] there are several.

Hab.—Morialta Gully, above first waterfall, and Mallala, South Australia.

The description of the male is as follows:—

♂. Cephalothorax, 9.5 mm. long, 8.1 mm. broad; abdomen, 10.3 mm. long, 5.6 mm. broad (Pl. xvii., fig. 31).

Cephalothorax.—Obovate, dark brown, sparingly clothed with yellowish pubescence, arched. *Pars cephalica* ascending, narrow in front, segmental groove distinct; *ocular area* broader than long, raised; *clypeus* narrow. *Pars thoracica* broad, radial grooves distinct; *thoracic forea* deep, straight; *marginal band* fringed with rather long hairs. *Eyes*.—Distributed over two rows of four each, the front row being procurved and the rear recurved; front side eyes somewhat elliptical, poised obliquely, slightly larger than their median neighbours; the latter are round, and separated from each other by a space equal to one half their own individual diameter, and each again from its lateral neighbour by about the same space; rear side eyes equal in diameter to anterior medians, elliptical, and poised obliquely; rear median eyes smallest of the group, elliptical, each just touching the upper point of its lateral neighbour. *Legs*.—Rather lighter in colour than cephalothorax, densely hairy and strongly bespined; tibia i. has an apophysis, at summit of which there is a powerful spine (Pl. xxiv., fig. 113); metatarsi partially scopulated, the tarsi fully so; relative lengths: 4, 1, 2, 3. *Palpi*.—Long, strong, similar in colour, clothing and armature to legs; bulb large, somewhat pear-shaped, bilobed, shining, and terminating in a long, fine and tapering style (Pl. xxiv., fig. 114). *Falces*.—Concolorous with cephalothorax, not very strong, narrow and densely clothed with fine hairs and long coarse bristles; inner ridge of the furrow of each falx armed with a row of seven strong teeth, with, at the base, an intermediate series of three or four minute ones; *fang* long, shining, dark brown, well curved. *Maxille*.—Dark brown, long, rather narrow, arched, hairy, slightly excavated around the lip, heel well rounded, furnished at base

with a cluster of small spines. *Labium*.—Concolorous, submerged, rather broader than long, arched, apex slightly rounded, two or three small spines present, surface clothed with bristly hairs. *Sternum*.—Concolorous with labium, pyriform, hairy; *sigilla* round, small, marginal. *Abdomen*.—Obovate, slightly overhanging base of cephalothorax, densely clothed with long hairs; superior surface dark brown, mottled with yellow; inferior surface yellow brown. *Spinnerets*.—Yellow, hairy; superior pair tapering, third joint rather longer than the first, the second much the shortest; inferior pair cylindrical, and separated from each other by a space equal to rather more than once their own individual transverse diameter.

Obs.—Collector's note: "Several males crawling about."

Hab.—Morialta, above first waterfall, South Australia.

CHENISTONIA TEPPERI, Hogg.

Chenistonia tepperi, Hogg, Proc. Zool. Soc., 1902, p. 137, pl. xiii., fig. 13.

Hab.—Mylor Road (October, 1911), and Mount Lofty, South Australia.

CHENISTONIA HOGGI, Rainbow.

Chenistonia hoggi, Rainbow, Rec. Austr. Mus., x., 8, 1914, p. 240, figs. 50, 51.

Hab.—Kaianga Valley, New South Wales.

CHENISTONIA AUROPILOSA, *sp. nov.*

(Pl. xxiv., fig. 115.)

♀. Cephalothorax, 7.2 mm. long, 6 mm. broad; abdomen, 6.8 mm. long, 4.7 mm. broad.

Cephalothorax.—Obovate, yellow, arched, moderately clothed with fine golden yellow pile. *Pars cephalica* ascending, moderately high, sides somewhat compressed; *ocular area* broader than long, raised, summit dark brown, fringed in front with a tuft of stiff bristles; *clypeus* moderately broad, hyaline, slightly excavated at middle. *Pars thoracica* rather broad, uneven, radial grooves distinct; *thoracic fovea* deep, straight, *marginal band* yellow, undulated, fringed with yellow hairs. *Eyes*.—Distributed over two rows of four each, the front row procurved, and the rear recurved; front side eyes largest of the group, elliptical, and poised obliquely; front middle eyes round, and separated from each other by a space equal to three-quarters that of their own individual diameter, and each again from its lateral neighbour by about one-half that space; rear lateral eyes are elliptical, poised obliquely, and of the same diameter as the front middle; front and rear side eyes closely approximating, but not touching; posterior medians smallest of the group, widely separated, truncated at apex, each touching the ring of its outer neighbour (Pl. xxiv., fig. 115). *Legs*.—Concolorous with cephalothorax, moderately long, tapering, clothed with dark hairs, but displaying on each patella a

narrow, naked area; each limb armed with moderately long and strong black spines; all tarsi scopulated, and a portion of metatarsi i. and ii.; relative lengths; 4, 1, 2, 3. *Palpi*.—Long, moderately strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Fulces*.—Concolorous with cephalothorax, projected well forward, moderately strong, clothed with short fine hairs and long coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with a row of eight strong teeth; in addition to these there is at the base an intermediate series consisting of four small teeth, and several minute ones; *fang* long, reddish-brown, well curved. *Maxillae*.—Yellow, hairy, arched, excavated at base, where it is thickly studded with small spines; heel well rounded; beard yellowish. *Labium*.—Concolorous, arched, moderately hairy, free, submerged, not spined, short, broader than long, apex slightly excavated and fringed with long hairs. *Sternum*.—Concolorous also, nearly round, arched, hairy; *sigilla* rather small, marginal. *Abdomen*.—Obovate, very slightly overhanging base of cephalothorax, arched, clothed with long golden-yellow hairs; superior surface dark brown, spotted with yellow, the spots, however, only showing when the animal is immersed in alcohol; sides and inferior surface yellow. *Spinnerets*.—Yellow, hairy; superior pair tapering, the third joint longest and the second shortest; inferior spinners cylindrical, and separated from each other by a space equal to once their own individual diameter.

Obs.—The spinnerets in the type have been unduly distended. Collector's field note reads: "Open burrow."

Hab.—Armadale, West Australia (May 23, 1912).

CHENISTONIA VILLOSA, sp. nov.

(Pl. xxiv., fig. 116.)

♀. Cephalothorax, 10.3 mm. long, 8.4 mm. broad; abdomen, 10.9 mm. long, 6 mm. broad.

Cephalothorax.—Obovate, dark reddish-brown, arched, sparingly pilose. *Pars cephalica* smooth, gently ascending, fringed in front of eyes with a tuft of stiff bristles, segmental groove distinct; *ocular area* broader than long, raised; *clypeus* narrow, rather dark, hyaline. *Pars thoracica* uneven, radial grooves distinct; *thoracic fovea* straight; *marginal band* narrow, undulated, fringed with rather long hairs. *Eyes*.—Distributed over two rows of four each, the front row procurved and the rear recurved; front laterals much the largest of the group, elliptical, and poised obliquely; front median eyes round, separated from each other by a space equal to about three-fourths their own individual diameter, and each again from its lateral neighbour by about half a diameter; rear laterals larger than anterior median eyes, elliptical, poised obliquely, each touching apex of its anterior lateral neighbour; posterior medians almost round, smallest of the group, widely separated, each just touching its lateral neighbour (Pl. xxiv., fig. 116). *Legs*.—Moderately long, concolorous with cephalothorax, hairy, but displaying naked areas, each armed with long, strong spines, those on legs i. and ii. being the most numerous; scopulation normal;

relative lengths: 4, 1, 2, 3. *Palpi*.—Similar in colour, clothing and armature to legs i. and ii. *Falces*.—Dark brown, nearly black, projected well forward, clothed with fine hairs and coarse bristles; inner ridge of the furrow of each falx armed with a row of nine strong teeth, in addition to which there is, near the base, a series of three or four minute ones; beard red; *fang* long, black, shining, well curved. *Maxillæ*.—Reddish yellow, shining, arched, hairy, excavated round the lip, at which point there is a thick cluster of small spines; inner angle yellow, beard red; heel well rounded. *Labium*.—Short, broad, arched, shining, apex excavated, and fringed with bristles; there are also a few hairs on the surface, but no spines. *Sternum*.—Concolorous, broad, oval, arched, hairy; *sigilla* marginal. *Abdomen*.—Oval, arched, slightly overhanging base of cephalothorax, dark brown, thickly clothed with long, grey hairs. *Spinnerets*.—Dark brown, hairy; superior pair tapering, first and third joints of equal length, second shortest; inferior pair short, cylindrical, and close together.

Obs.—One female with young.

Hab.—Carlotta Brook, Karri Country, West Australia (December, 1917).

Genus Sungenia,¹⁷ *gen. nov.*

Allied to Hogg's genera *Chenistonia* and *Dekana* by the tibial apophysis on leg i. terminating in a powerful spine, but differing from the former by the *thoracic forea* being strongly procurved instead of straight, and from the latter in having the posterior sternal *sigilla* marginal instead of being away from the margin, each of which are major features from a generic standpoint. The *eyes* are mounted upon a tubercle, the area of which is broader than long, they are distributed over two rows of four each, the front one being procurved, and the rear recurved; the anterior and lateral eyes are of equal size and largest of the group; anterior medians round; rear medians smallest of the group.

SUNGENIA ATRA, *Strand.*

Chenistonia (Dekana) atra, Strand. Zoologisch. Jahrb., 1913, p. 601.

Hab.—Balingup, South West Australia (December, 1917).

Genus Ixamatus, *Simon.*

As pointed out in a former paper by one of the writers¹⁸ of this essay, the definition of the genus *Ixamatus* is not very clear. The forms described by L. Koch and Hogg were all males, whilst *I. distinctus*, Rainbow, and the one hereunder described are females.

According to Hogg¹⁹ the *thoracic forea* of his *I. gregori* is straight, whilst that of *I. broomi* of the same author is long, and deep, and clearly

¹⁷ οὐγγενεία, kinship.

¹⁸ Rainbow—Rec. Austr. Mus., v., 8, 1914, pp. 235-6 and 238.

¹⁹ Hogg—P.Z.S., 1901, pp. 258 and 260.

recurred. In *I. varius*, L. Koch, the fovea is straight, as is the case with the form described hereunder; *I. distinctus*, on the other hand, has the fovea slightly procurved. If the shape and direction of the thoracic fovea is of strict generic importance, then *I. broomi* and *I. distinctus* will ultimately have to be accommodated in other genera, though for the present it may be as well to let them remain where they have been placed.

IXAMATUS DISTINCTUS, Rainbow.

Ixamatus distinctus, Rainbow, Rec. Austr. Mus., x., 8, 1914, p. 237, figs. 48 and 49.

Obs.—A single female, and an immature example. For notes in respect of the genus *Ixamatus*, Simon, see author's notes, *suprà*, p. 235-237.

Hab.—Eidsvold, Queensland.

IXAMATUS MACULATUS, *sp. nov.*

(Pl. xxiv., fig. 117.)

♀. Cephalothorax, 4·7 mm. long, 3·4 mm. broad; abdomen, 5·8 mm. long, 3·2 mm. broad.

Cephalothorax.—Obovate, dark brown, arched, sparingly pubescent. *Pars cephalica* ascending, moderately high, segmental groove distinct; *ocular area* nearly black, broader than long, raised, fringed in front with a small tuft of bristles; *clypeus* narrow, dark, hyaline. *Pars thoracica* uneven, radial grooves moderately distinct; *thoracic fovea* deep, straight *marginal band* undulated, slightly reflexed, fringed with rather long hairs. *Eyes*.—Distributed over two rows of four each, the front row being procurved, and the rear recurved; front lateral eyes largest of the group, elliptical, and poised obliquely; front medians round, very slightly smaller than the long diameter of the rear lateral eyes, separated from each other by about once their own individual diameter, and each again from its lateral neighbour by rather less than that space; rear side eyes elliptical, poised obliquely; posterior intermediates smallest of the group, but not minute, oval, each just touching the ring of its outer neighbour (Pl. xxiv., fig. 117). *Legs*.—Moderately long, not strong, yellow, clothed with dark brown hairs, but displaying naked areas, each limb bespined; tarsi i. and ii. only scopulated; relative lengths: 4, 1, 2, 3. *Pulpi*.—Rather long, moderately strong, similar in colour, clothing and armature to legs; tarsi scopulated. *Fulves*.—Concolorous with cephalothorax, projecting, moderately strong, clothed with fine hairs and coarse bristles; inner ridge of each falx armed with a row of six moderately strong teeth; *fang* shining, reddish-brown. *Maxille*.—Yellow, hairy, slightly excavated at base, where there is a cluster of small spines; beard yellow; heel well rounded. *Labium*.—Concolorous, short, broader than long, free, submerged, apex fringed with bristles and slightly excavated; no spines present. *Sternum*.—Concolorous also, yellow, shield-shaped, arched, moderately clothed with black, stiff, bristly hairs; *sigilla*

moderately large, marginal. *Abdomen*.—Obovate, arched, hairy, slightly overhanging base of cephalothorax, superior surface dark brown, mottled with yellow spots; sides and inferior surface yellow, flecked with dark brown spots and markings. *Spinnerets*.—Yellow, hairy; superior pair tapering; inferior spinners about one-and-a-half their transverse diameter apart.

Obs.—Two females, one slightly larger and darker than the other. Found in open burrow.

Hab.—Armadale, West Australia (May 25, 1912).

Genus Stanwellia, gen. nov.

Cephalothorax.—Obovate. *Pars cephalica*, arched, ascending, rather high; *ocular area* raised, broader than long. *Pars thoracica* arched; *thoracic fovea* straight. *Eyes*.—Distributed over two rows of four each, front row slightly procurved, the rear recurved; front lateral eyes largest of the group, elliptical, rear medians the smallest; rear eyes, both side and intermediate, large and elliptical. *Legs*.—Moderately long; metatarsi i. and ii. scopulated; tarsi iii. and iv. scopulated; tarsal claws, three. *Falces*.—Inner ridge only of the furrow of each falx dentated; no *rustellum*. *Labium*.—Free, short, broader than long, apex slightly excavated. *Sternum*.—Longer than broad; *sigilla* moderate in size, marginal. *Spinnerets*.—Superior pair moderately long, tapering, second joint shortest; inferior pair short, rather stout, close together.

STANWELLIA DECORA, sp. nov.

(Pl. xxiv., fig. 118.)

♀. Cephalothorax, 9·8 mm. long, 8·2 mm. broad; abdomen, 11·5 mm. long, 7·1 mm. broad.

Cephalothorax.—Obovate, dark brown, arched, well clothed with golden yellow pubescence. *Pars cephalica* ascending, high, truncated in front, segmental groove distinct; *ocular area* raised, arched, broader than long, nearly black, fringed in front with a tuft of stiff bristles; *clypeus* narrow, precipitate, hyaline. *Pars thoracica* moderately broad, radial grooves distinct; *thoracic fovea* rather deep, straight; *marginal band* fringed with fine black hairs. *Eyes*.—Distributed over two rows of four each, the front row being slightly procurved, and the rear very distinctly recurved, anterior lateral eyes largest of the group, elliptical, and poised obliquely; anterior medians round, and separated from each other by a space equal to about once their own individual diameter, and each again from its lateral neighbour by a space scarcely equal to that distance; rear lateral and intermediate eyes close together, their apices touching, elliptical; the outer eyes are poised obliquely, and are but very slightly larger than their intermediate neighbours; under the micrometer the rear outer lateral eyes measure five, and the intermediate one four and three-quarters (Pl. xxiv., fig. 118). *Legs*.—Moderately long and strong, tapering, concolorous with cephalothorax, hairy, but displaying naked areas, each limb armed with long

fine spines, those on legs iii. and iv. being the most numerous; metatarsi and tarsi i. and ii. scopulated; tarsi iii. and iv. only scopulated; claws three, inferior claw very small: relative lengths: 4, 1, 2, 3. *Palpi*.—Concolorous with legs, short, strong, hairy, spined; tarsi scopulated. *Falces*.—Projected, dark brown, well clothed with short, fine hairs and coarse bristles, but displaying naked areas; inner ridge of the furrow of each falx armed with nine strong teeth, in addition to which there is an intermediate series of three or four minute ones at the base. *Maxillæ*.—Peddish-brown, inner angle yellow, arched, hairy, excavated at base, where there is a cluster of small spines, heel well rounded, beard red. *Labium*.—Concolorous, short, very slightly broader than long, arched, free; three or four small spines near apex, which latter is slightly excavated, and fringed with stiff bristles; a few fine hairs on surface. *Sternum*.—Concolorous with labium, slightly arched, elongate, broadest between third pair of coxæ, clothed with stiff bristles; *sigilla* moderate in size, marginal, posterior pair largest. *Abdomen*.—Obovate, arched, hairy, slightly overhanging base of cephalothorax; superior surface yellow, ornamented with broken or interrupted brown markings, the latter forming an irregular design consisting of a longitudinal band and three or four transverse bars; inferior surface yellow with dark brown spots. *Spinnerets*.—Pale yellow, hairy; superior pair nearly half as long as cephalothorax, tapering, second joint slightly the shortest, first and third of equal length; inferior spinners very short, rather thick, rounded at apex, and separated from each other by a space equal to once their own individual transverse diameter.

Obs.—Two immature examples were collected [R.H.P.] in August, 1908, and two fully grown ones in August, 1910. Of the latter one is considerably lighter in colour than the other. Probably it is slightly the younger of the two.

Hub.—Stanwell Park, New South Wales.

Genus Atrax, O. P. Cambr.

ATRAX VALIDA, sp. nov.

(Pl. xxiv., fig. 119.)

♀. Cephalothorax, 12·6 mm. long, 9·6 mm. broad; abdomen, 14·8 mm. long, 9·6 mm. broad.

Cephalothorax.—Obovate, dark brown, arched, shining, very sparingly clothed with fine yellow hairs. *Pars cephalica* fringed in front with short, fine black hairs, ascending, high, slightly depressed on each side of eye space, sloping gently from summit to clypeus, sides compressed and unevenly indented, a median fringe of long, moderately stiff black bristles runs from base to *ocular area*, which latter is broader than long; *clypeus* narrow, precipitous, undulated, yellowish at sides, reddish-brown at middle, where it is furnished with a rather large tuft of black bristly hairs. *Pars thoracica* uneven, radial grooves distinct; *thoracic fovea* moderately deep, procurved; *marginal band* narrow, yellowish, fringed with stiff black hairs. *Eyes*.—Distributed over two rows of four each; viewed from the side the front row is straight, or but very slightly procurved; rear row recurved;

front lateral eyes largest of the group, elliptical, and poised obliquely; anterior medians round, once their own individual diameter apart, and each separated again by about half that space from its lateral neighbour; rear laterals elliptical, and poised obliquely; rear medians smallest of the group, each just touching its lateral neighbour; both rows close together, and the front one near the edge of clypeus (Pl. xxiv., fig. 119). *Legs*.—Not long, powerful, hairy, but displaying narrow naked areas, each limb armed with short stiff spines; relative lengths: 4, 1, 2, 3. *Palpi*.—Short, strong, similar in colour, clothing and armature to legs. *Fulcres*.—Strong, well projected, concolorous with cephalothorax, clothed with long, coarse hairs and bristles, and displaying no naked areas; inner ridge of the furrow of each falx armed with a row of nine strong teeth, and the outer with a row of eleven; in addition to these there is a thickly clustered group of minute teeth running from base to apex, and forming an intermediate series; *fang* long, black, strong, well curved. *Maxillæ*.—Reddish-brown, arched, strong, hairy, inner angle terminating in an obtuse point, base excavated, heel well rounded; greater portion of the surface of each maxilla thickly studded with small spines. *Labium*.—Free, concolorous, short, slightly longer than broad, arched, apex fringed with long bristles, entire surface thickly studded with small spines, thereby presenting a strongly granulated appearance. *Sternum*.—Concolorous also, shield-shaped, densely hairy, arched; posterior *sigilla* large and marginal. *Abdomen*.—Ovate, slightly overhanging base of cephalothorax, arched, dark brown, hairy. *Spinnerets*.—Short, yellow, stout, clothed with dark brown hairs; superior pair tapering, second joint shortest; inferior spinners very small, and separated from each other by a space equal to about that of once their own individual transverse diameter.

Obs.—Several specimens of this fine spider were collected by one of us [R.H.P.] and Dr. T. Bancroft. Younger examples display some little variation in the number and distribution of the intermediate series of falx teeth. Our field note reads:—"With expanded web; no lid." From the nest of one example an ova-sac was obtained. The sac is white, large, round, flat, measuring 90 mm. in circumference, cushion-shaped, closely woven, and of very strong texture.

Hab.—Tambourine Mountain, Queensland (May 10, and October 7, 1912).

Group ANEPSIADEÆ.

For the reception of the following species there appears to be no alternative but to erect a new group and a new genus. For the group we propose the name *Anepsiadæ*, and for the genus that of *Anepsiada*. The example under study agrees with *Atrax*, O. P. Cambr., and *Hudronyche*, L. Koch, in having both ridges of each falx armed with teeth, and also by the presence of an intermediate row, but it differs from each of the genera named by the sternal *sigilla* being marginal, and also by the absence of tarsal scopula. Like *Hudronyche* the cephalic segment is large, raised, and round, though not so much so as in *Missulena*, Walck. The labium is not as defined and figured by L. Koch²⁰ in his description

²⁰ L. Koch—Die Arach. des Austr., i., 1873, p. 463, pl. xxxv., fig. 6b.

of the genus *Hadronyche* but conforms more to that as described by Hogg.²¹ There are three tarsal claws, each of which, including the inferior, are well developed. The spinnerets also differ from the Atracæ, the first joint of the superior pair being longer than the second, but not longer than the second and third combined. Taking these several points into consideration, we consider the only place where the form now under consideration can be placed is after the group Poikilomorphiæ, of Rainbow.

Genus Anepsiada,²² *gen. nov.*

Cephalothorax.—*Pars cephalica* raised and rounded as in *Hadronyche*, L. Koch; *ocular area* broader than long, not raised; *clypeus* narrow. *Pars thoracica* uneven, radial grooves distinct; *thoracic fovea* deep, procurved. *Eyes*.—Distributed over two rows of four each, the front row being slightly procurved, and the rear recurved. *Legs*.—Short, not strong, tarsi armed with three claws, no scopulæ present; relative lengths: 4, 1, 2, 3. *Palpi*.—Short, not strong. *Fulces*.—Moderately projected; inner and outer ridges of each falx armed with teeth, in addition to which there is an intermediate row. *Maxillæ*.—Short, spined, base not excavated, apex of inner angle terminating obtusely. *Labium*.—Short, broader than long, free, surface bespined. *Sternum*.—Broad, shield-shaped, anterior angle curved well round the tip, and terminating on each side in an acuminate point; *sigilla* marginal, posterior pair large. *Spinnerets*.—Short; the superior pair have the first joint longer than the second, but not longer than the second and third combined.

ANEPSIADA VENTRICOSA, *sp. nov.*

(Pl. xxiv., fig. 120.)

♀. *Cephalothorax*, 4·8 mm. long, 4 mm. broad; *abdomen*, 8·3 mm. long, 5·6 mm. broad.

Cephalothorax.—Obovate, shining, yellow-brown, broadest near front pair of legs. *Pars cephalica* high, ascending, truncated in front, deeply impressed on each side near the base, thoracic groove distinct; *ocular area* broader than long, not raised; *clypeus* narrow. *Pars thoracica* broad, uneven, retreating, radial grooves profound; *thoracic fovea* deep, procurved. *Eyes*.—Distributed over two rows of four each, the front row being slightly procurved, and the rear recurved; both rows close together; front lateral eyes largest of the group, elliptical, and poised obliquely; anterior medians round and separated from each other by a space equal to that of one-half their own individual diameter, and each again from its lateral neighbour by about half that space; rear lateral eyes elliptical also and obliquely poised; anterior intermediates smallest of the group, widely separated, each just touching the ring of its outer neighbour (Pl. xxiv., fig. 120). *Legs*.—Not long, moderately strong, concolorous with cephalothorax, hairy, but displaying naked areas; each

²¹ Hogg—Proc. Zool. Soc., 1901, p. 274.

²² ἀνεψιάδης, a female cousin.

tarsus and metatarsus armed with strong spines; the hairs with which the legs are clothed are long and coarse; superior claws have each at the base two large teeth, succeeded by four very small ones; relative lengths: 4, 1, 2, 3. *Palpi*.—Short, not strong, similar in colour, clothing and armature to legs. *Falces*.—Rather strong, moderately projected, arched, shining, hairy, but displaying naked areas; apical hairs red; inner ridge of the furrow of each falx armed with nine strong teeth, and the outer with ten; in addition to these there is at the base four or five minute ones; *fang* moderately long, well curved. *Maxille*.—Yellowish-brown, hairy, arched, not excavated at base, inner angle bearded with yellow, and terminating obtusely at apex; inner area from base to near apex thickly spined. *Labium*.—Free, concolorous, short, broader than long, arched, almost the entire surface thickly spined; apex gently curved. *Sternum*.—Concolorous also, broad, somewhat shield-shaped, arched, hairy, broadest between third pair of coxæ, anterior angle curved well round the lip, and terminating at each side in an acuminate point; *sigilla* marginal, the third pair largest. *Abdomen*.—Obovate, yellow-brown, well arched, slightly overhanging base of cephalothorax, the surface clothed with fine yellow hairs. *Spinnerets*.—Yellow, hairy, short; superior pair not stout, tapering, first joint longest, the second shortest; inferior spinners very small, cylindrical, apices round, separated from each other by a space equal to that of once their own individual transverse diameter.

Hab.—Cloncurry, Central Queensland.

Group DOLICHOSTERNEÆ.

For the reception of the following remarkable species we propose a new group, Dolichosterneæ, and a new genus, *Dolichosternum*. This group is placed near the end of the subfamily Diplurinae, to which, from the fact that the unique example now under study possesses three claws and four spinnerets, has the lip free, and is devoid of a rastellum, it would seem to belong. One of the most interesting features of this extraordinary spider is that the sternum is very long and attenuated, its measurements being: Length, 4.5 mm., and width, at its widest part, 1 mm. In fact, it looks more like an elongated, bluntly-pointed spine. The superior spinners are also widely apart, and the *anal tubercle* well developed. In all other respects it is a true Diplurid. The interesting novelty was collected by Dr. T. Bancroft, at Eidsvold, Queensland.

Genus *Dolichosternum*,²³ gen. nov.

Cephalothorax.—Obovate, truncated in front. *Pars cephalica* ascending gently; *ocular area* broader than long, raised; *clypeus* narrow. *Pars thoracica* retreating; *thoracic fovea* moderately deep, procurved. *Eyes*.—Distributed over two rows of four each; anterior row procurved, rear row recurved. *Legs*.—Moderately long, not strong; metatarsi and tarsi i. and ii. scopulated; relative lengths: 4, 1, 2, 3. *Palpi*.—Moderately long, not strong, tarsi scopulated. *Falces*.—Projected well forward;

²³ δολιχο, narrow, στερον, chest; = narrow chest.

inner angle only of furrow of each falx armed with teeth. *Maxille*.—Slightly excavated at base, heel rounded. *Labium*.—Short, broad, free. *Sternum*.—Long, narrow, broadest at base, and terminating obtusely between fourth pair of coxæ; coxæ long. *Abdomen*.—Obovate. *Spinnerets*.—Superior pair moderately long, stout, tapering, first joint longest, the second shortest; inferior pair small, close together.

DOLICHOSTERNUM ATTENUATUM, sp. nov.

(Pl. xxiv., figs. 121 and 122.)

♀. Cephalothorax, 8·9 mm. long, 5·6 mm. broad; abdomen, 9·6 mm. long, 6·6 mm. broad; sternum, 4·5 mm. long, 1 mm. broad at its widest point.

Cephalothorax.—Obovate, truncated in front, arched, dark brown (nearly black), sparingly clothed with fine yellow hairs. *Pars cephalica* smooth, moderately high, ascending, sides somewhat declivous, segmental groove faintly distinct; *ocular area* broader than long, raised; *clypeus* very narrow. *Pars thoracica* smooth, radial grooves indistinct; *thoracic fovea* deep, procurved; *marginal band* narrow, undulating, slightly reflexed, fringed with fine hairs. *Eyes*.—Distributed over two rows of four each; front row slightly procurved, the rear distinctly recurved; eyes of front row close together; of these the laterals are slightly the largest, and poised obliquely; anterior medians round; rear laterals elliptical, poised obliquely, each nearly touching its lateral neighbour; rear medians widely separated, elliptical also, smallest of the group, each touching its lateral neighbour (Pl. xxiv., fig. 121). *Legs*.—Dark reddish-brown, moderately long, not strong, tapering, hairy, but displaying naked areas, armed with moderately long black spines; metatarsi and tarsi i. and ii. scopulated; relative lengths; 4, 1, 2, 3. *Palpi*.—Moderately long, not very strong, similar in colour, clothing and armature to legs, tarsi scopulated. *Falces*.—Concolorous with cephalothorax, projected well forward, clothed with fine hairs and coarse bristles, but displaying naked areas; inner angle of the furrow of each falx armed with six strong teeth. *Maxille*.—Reddish-brown, long, hairy, arched, angle near lip slightly excavated, heel well rounded, basal area thickly studded with small spines; beard reddish yellow. *Labium*.—Yellowish, moderately hairy, arched, submerged, short, broad as long, apex rounded and fringed with long bristles; no spines present. *Sternum*.—Elongate, narrow, well arched, broadest between coxæ i. and ii., apex obtusely pointed, and terminating between coxæ iv., surface smooth, and with the sides furnished with a few long, fine hairs; no *sigilla* present (Pl. xxiv., fig. 122). *Abdomen*.—Obovate, dark brown, hairy; arched, slightly overhanging base of cephalothorax. *Spinnerets*.—Dull yellowish, hairy; superior pair tapering, rather widely apart, first joint longest, second shortest; inferior spinners short, very close together; *anal tubercle* well developed.

Hab.—Eidsvold, Queensland.

EXPLANATION OF PLATE XII.

- Fig. 1. *Missulena occatoria*, Walck., ♀, from above (enlarged).
.. 2. " " " " " beneath "
.. 3. *Aganippe subtristis*, O. P. Cambr., ♀ (enlarged).
.. 10. *Dyareyops melancholicus*, ♀, Rainb. and Pull., eyes.



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EXPLANATION OF PLATE XIII.

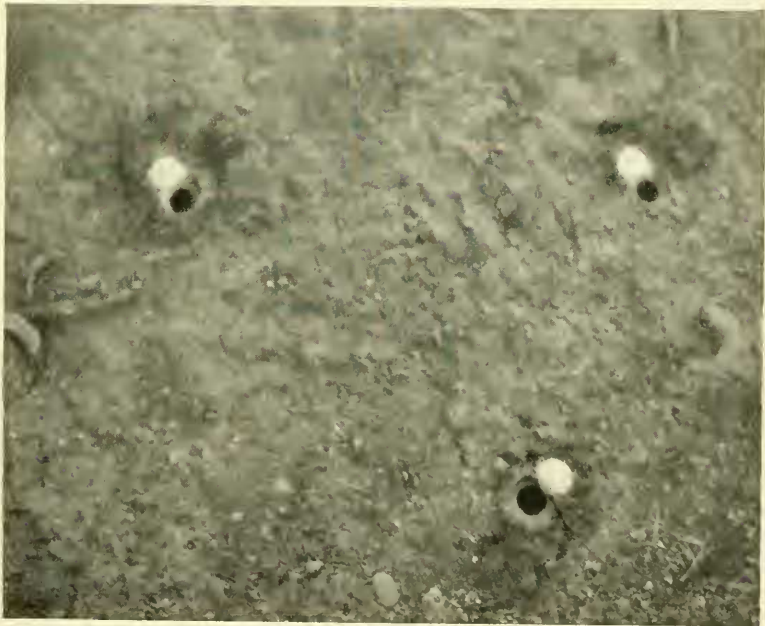
- Fig. 4. *Aganippe modesta*, Rainb. and Pull., nest closed.
.. 5. " " " " " " open.
.. 8. *Blakistonia aurea*, Hogg, nests with lids open (greatly reduced).



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EXPLANATION OF PLATE XIV.

- Fig. 6. *Blakistonia aurea*, Hogg, ♂.
,, 9. *Dyarecyops birói*, Knlez., ♀.
,, 11. *Arbanitis pulchellus*, Rainb. and Pull., ♀.
,, 12. *Tambouriniana variabilis*, Rainb. and Pull., ♀.



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EXPLANATION OF PLATE XV.

- Fig. 7. *Blakistonia aurea*, Hogg, ♀ (natural size).
.. 13. *Euoplos spinnipes*, Rainb., ♀ ,,
.. 16. *Armadalia setosa*, Rainb. and Pull., ♀ (enlarged).
,, 25. *Aname grandis*, Rainb. and Pull., ♀ (slightly enlarged).



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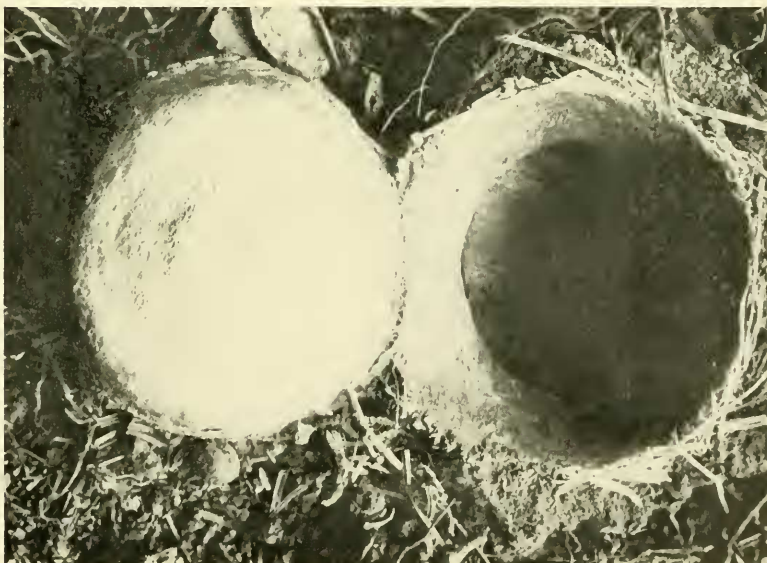
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EXPLANATION ON PLATE XVI.

- Fig. 14. *Euoplos spinuipes*, Rainb., nest closed (natural size).
„ 15. „ „ „ „ nest open „ „



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EXPLANATION OF PLATE XVII.

- Fig. 17. *Lampropodus scintillans*, Rainb. and Pull., ♂, from above.
 „ 18. „ „ „ „ ♂, from beneath.
 „ 19. „ „ „ „ ♀, from above.
 „ 20. „ „ „ „ ♀, from beneath.
 „ 31. *Chenistonia major*, Hogg, ♂.



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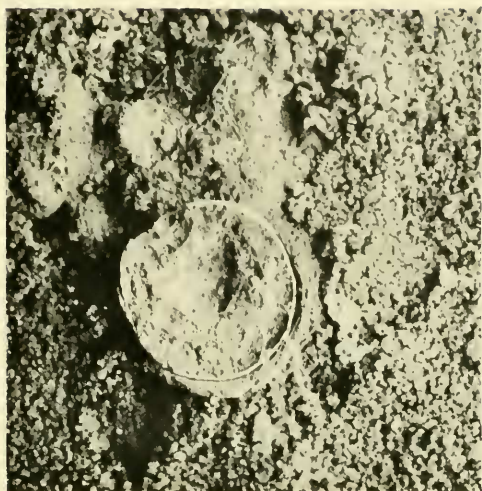
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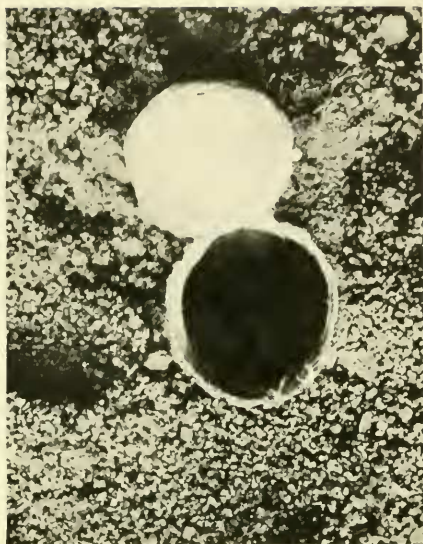
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EXPLANATION OF PLATE XVIII.

- Fig. 21. *Lampropodus scintillans*, Rainb. and Pull., nest closed.
„ 22. „ „ „ „ „ nest open.
„ 29. *Atrax valida*, Rainb. and Pull., ♀.
„ 30. „ *versuta*, Rainb., ♀ (enlarged).



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EXPLANATION OF PLATE XIX.

- Fig. 23. *Lampropodus iridesceus*, Rainb. and Pull., ♂, from above
(enlarged).
.. 24. Rainb. and Pull., ♂, from beneath
(enlarged).



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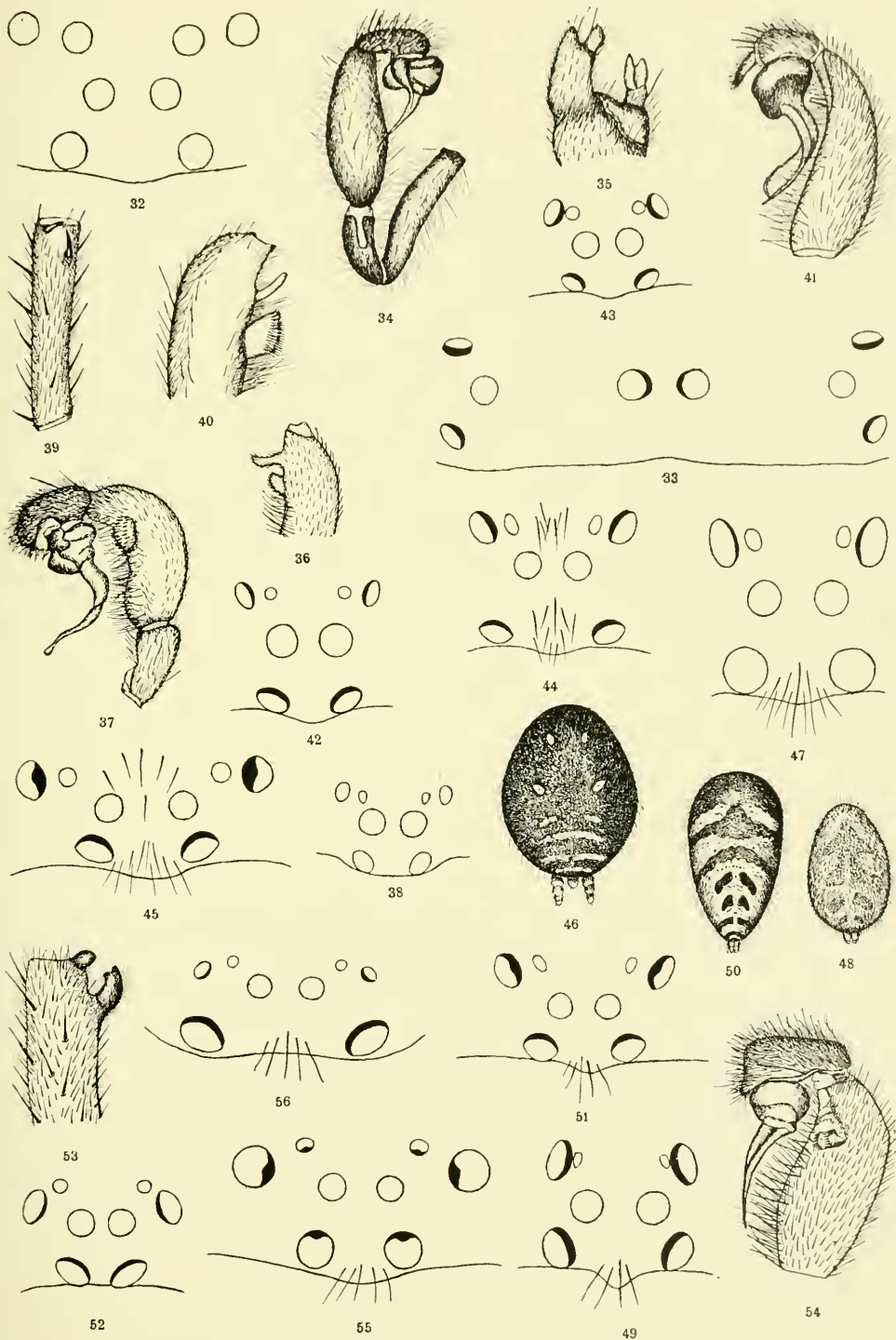
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EXPLANATION OF PLATE XX.

- Fig. 26. *Anane nebulosa*, Rainb. and Pull., entrance to nest.
- „ 27. „ „ „ „ „ longitudinal section of nest :
a upper part, *b* ball of earth
in position, *c* spider.
- „ 28. „ „ „ „ „ longitudinal section of nest :
a cuff open, *b* ball of earth,
c spider.

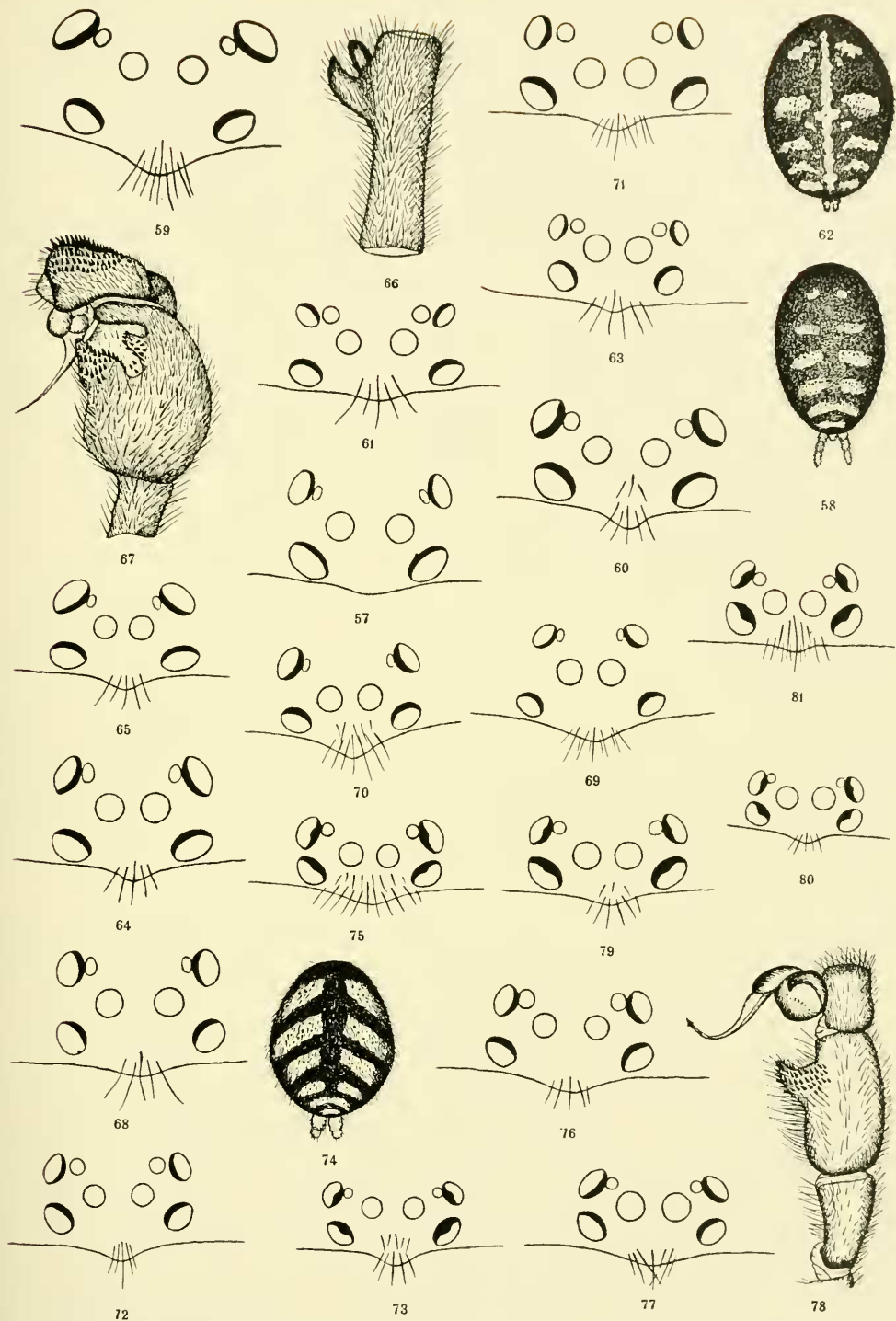
EXPLANATION OF PLATE XXI.

- Fig. 32. *Aganippe subtristis*, O. P. Cambr., ♂, eyes.
 „ 33. *Missulena reflexa*, Rainb. and Pull., ♂, „
 „ 34. „ „ „ „ ♂, palpus.
 „ 35. *Aganippe subtristis*, O. P. Cambr., ♂, apophysis of tibia i.
 „ 36. „ „ „ „ ♂, apophysis of palpus.
 „ 37. „ „ „ „ ♂, palpus.
 „ 38. „ *rhaphiduca*, Rainb. and Pull., ♂, eyes.
 „ 39. „ „ „ „ ♂, apophysis, tibia i.
 „ 40. „ „ „ „ ♂, apophysis of palpus.
 „ 41. „ „ „ „ ♂, palpus.
 „ 42. „ „ „ „ ♀, eyes.
 „ 43. „ *bancrofti*, „ „ ♀, „
 „ 44. „ *villosa*, „ „ ♀, „
 „ 45. „ *robusta*, „ „ ♀, „
 „ 46. „ „ „ „ ♀, abdomen.
 „ 47. „ *modesta*, „ „ ♀, eyes.
 „ 48. „ „ „ „ ♀, abdomen.
 „ 49. „ *ornata*, „ „ ♀, eyes.
 „ 50. „ „ „ „ ♀, abdomen.
 „ 51. „ *pelochroa*, „ „ ♀, eyes.
 „ 52. *Anidiops manstridgei*, Pocock, ♂, eyes.
 „ 53. „ „ „ „ ♂, palpus, apophysis.
 „ 54. „ „ „ „ ♂, palpus.
 „ 55. *Gaius hirsutus*, Rainb. and Pull., ♀, eyes.
 „ 56. *Dyarecyops ionthus*, Rainb. and Pull., ♀, eyes.



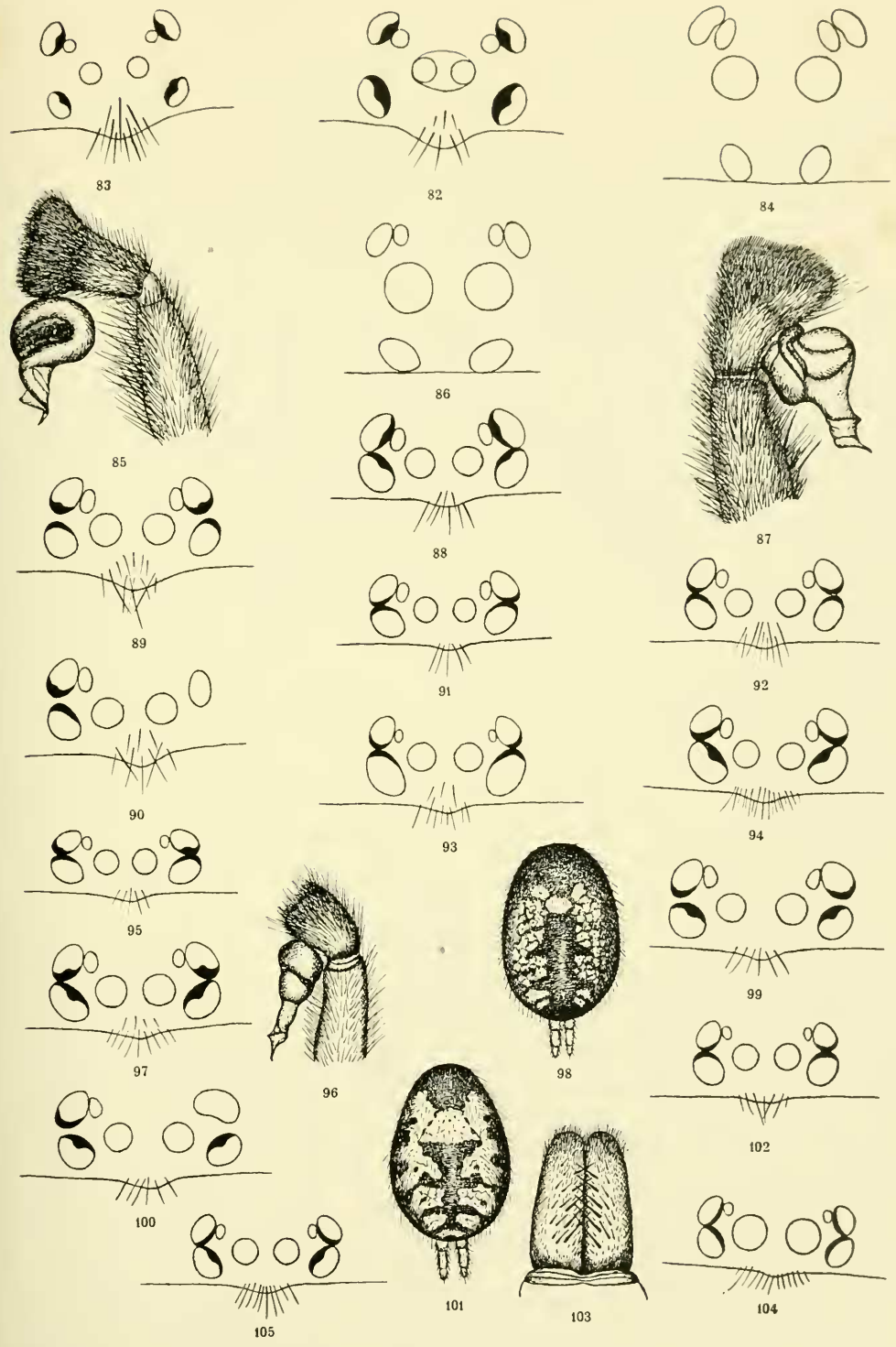
EXPLANATION OF PLATE XXII.

Fig. 57.	Arbanitis gracilis,	Rainb. and Pull.,	♀, eyes.
" 58.	"	"	♀, abdomen.
" 59.	"	festivus, "	♀, eyes.
" 60.	"	similaris, "	♀, "
" 61.	"	pulchellus "	♀, "
" 62.	"	"	♀, abdomen.
" 63.	"	elegans, "	♀, eyes.
" 64.	"	hirsutus, "	♀, "
" 65.	"	montanus "	♂, "
" 66.	"	"	♂, apophysis, tibia i.
" 67.	"	"	♂, palpus.
" 68.	"	"	♀, eyes.
" 69.	"	papillosus, "	♀, "
" 70.	"	inornatus, "	♀, "
" 71.	Tambouriniana	variabilis,	♀, "
" 72.	Albaniana	inornata, "	♀, "
" 73.	"	ornata, "	♀, "
" 74.	"	"	♀, abdomen.
" 75.	"	villosa, "	♀, eyes.
" 76.	"	flavomaculata,	♀, "
" 77.	Bancroftiana	speciosa,	♂, "
" 78.	"	"	♂, palpus.
" 79.	Armadalia	ornata, "	♀, eyes.
" 80.	"	setosa, "	♀, "
" 81.	"	zorodes, "	♀, "



EXPLANATION OF PLATE XXIII.

Fig. 82.	<i>Armadalia pallida</i> ,	Rainb. and Pull.,	♀, eyes.
„ 83.	<i>Cataxia tetrica</i> ,	„ „	♀, „
„ 84.	<i>Lampropodus scintillans</i>	„ „	♂, „
„ 85.	„ „	„ „	♂, palpus.
„ 86.	„ <i>iridescens</i>	„ „	♂, eyes.
„ 87.	„ „	„ „	♂, palpus.
„ 88.	<i>Aname villosa</i>	„ „	♀, eyes.
„ 89.	„ <i>hirsuta</i>	„ „	♀, „ normal.
„ 90.	„ „	„ „	♀, „ abnormal.
„ 91.	„ <i>comosa</i>	„ „	♀, „
„ 92.	„ <i>grandis</i>	„ „	♀, „
„ 93.	„ <i>aurea</i>	„ „	♀, „
„ 94.	„ <i>flavomaculata</i>	„ „	♀, „
„ 95.	„ <i>nebulosa</i>	„ „	♂, „
„ 96.	„ „	„ „	♂, palpus.
„ 97.	„ „	„ „	♀, eyes.
„ 98.	„ „	„ „	♀, abdomen.
„ 99.	„ <i>decora</i>	„ „	♀, eyes, normal.
„ 100.	„ „	„ „	♀, „ abnormal.
„ 101.	„ „	„ „	♀, abdomen.
„ 102.	„ <i>armigera</i>	„ „	♀, eyes.
„ 103.	„ „	„ „	♀, falces.
„ 104.	„ <i>maculata</i>	„ „	♀, eyes.
„ 105.	„ <i>cœnosa</i>	„ „	♀, „

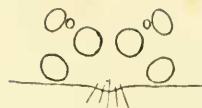


EXPLANATION OF PLATE XXIV.

Fig. 106.	<i>Aname fuscocincta</i> , Rainb. and Pull., ♀, eyes.
„ 107.	„ <i>pulchra</i> „ „ ♂, „
„ 108.	„ „ „ „ ♂, palpus.
„ 109.	„ <i>robusta</i> „ „ ♀, eyes.
„ 110.	„ <i>confusa</i> „ „ ♀, „
„ 111.	„ <i>intricta</i> „ „ ♀, „
„ 112.	„ <i>butleri</i> „ „ ♀, „
„ 113.	<i>Chenistonia major</i> , Hogg, ♂, tibia i., apophysis.
„ 114.	„ „ „ ♂, palpus.
„ 115.	„ <i>anropilosa</i> , Rainb. and Pull., ♀, eyes.
„ 116.	„ <i>villosa</i> „ „ ♀, „
„ 117.	<i>Ixamatus maculatus</i> „ „ ♀, „
„ 118.	<i>Stanwellia decora</i> „ „ ♀, „
„ 119.	<i>Atrax vallida</i> „ „ ♀, „
„ 120.	<i>Anepsiada ventricosa</i> „ „ ♀, „
„ 121.	<i>Dolichosternum attenuatum</i> „ „ ♀, „
„ 122.	„ „ „ „ „ , sternum and maxillæ.



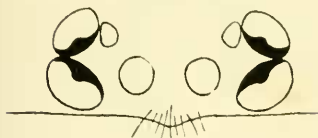
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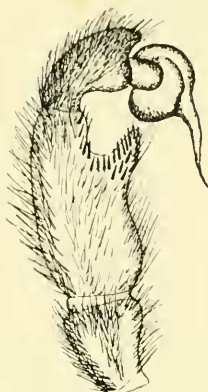
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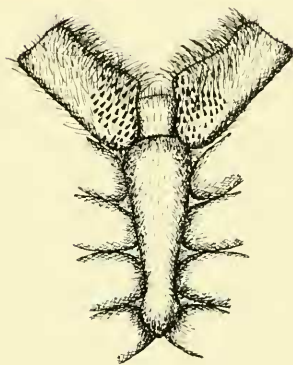
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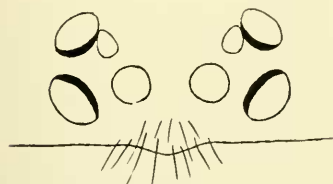
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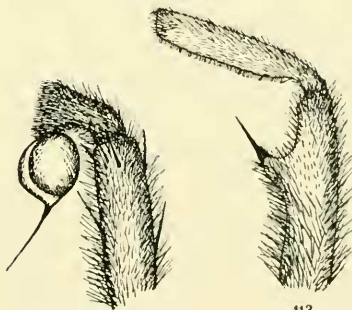
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